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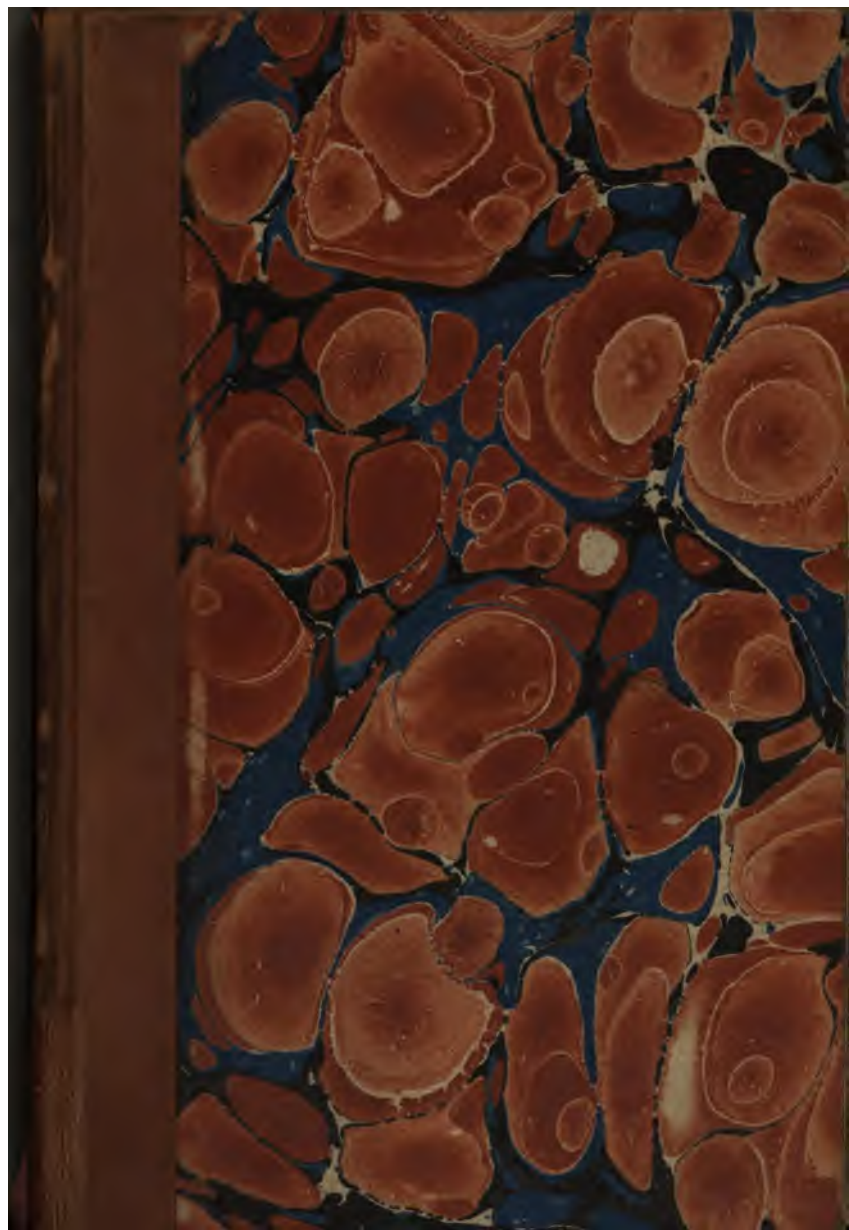
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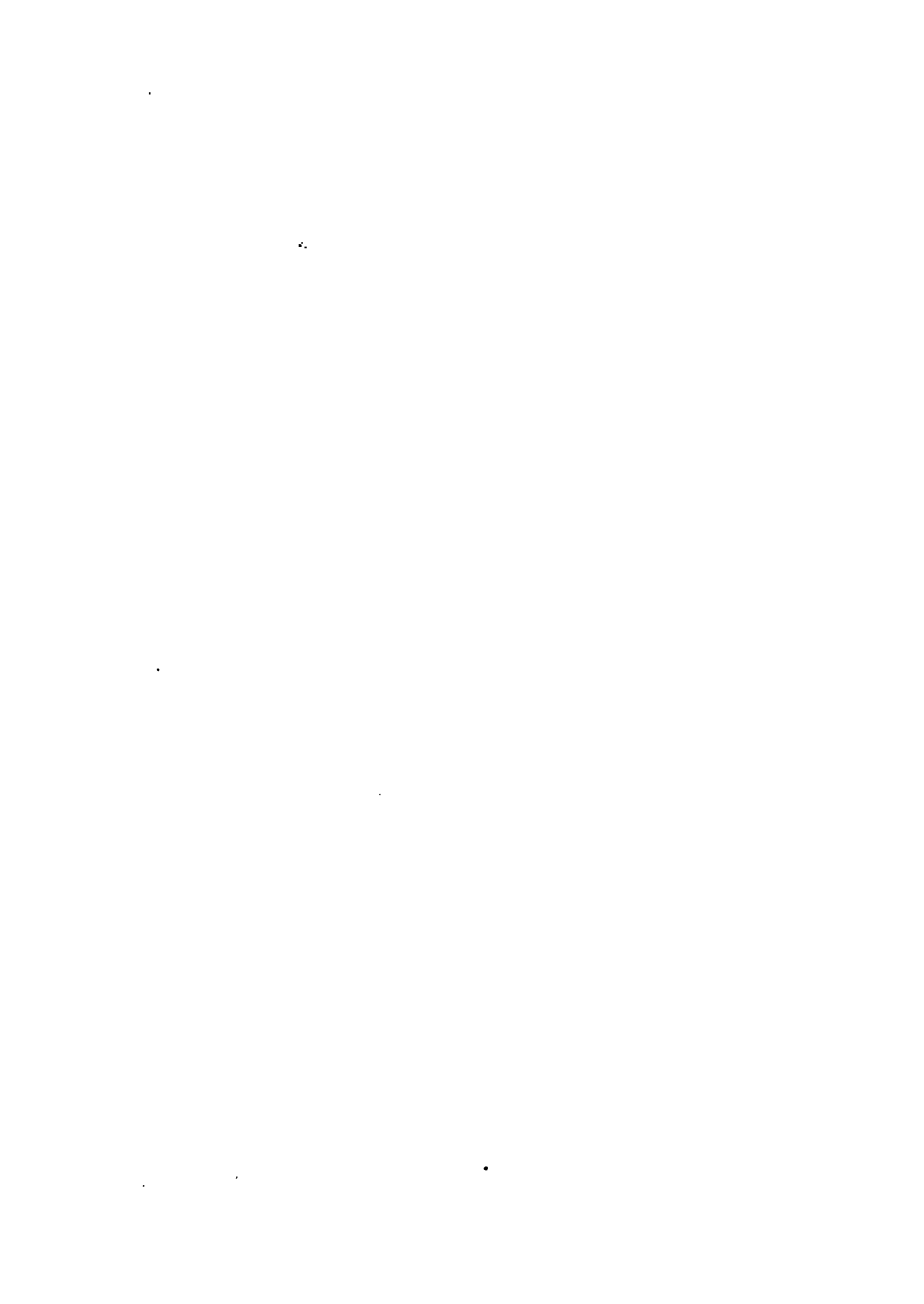
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HEADACHES,
THEIR
CAUSES AND THEIR CURE.

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PREFACE TO THE THIRD EDITION.

A YEAR has elapsed since my publisher informed me that a reissue of this work was required—the second edition, of fifteen hundred copies, being exhausted.

Many pressing duties delayed that careful revision which this favorable reception of the little book rendered a duty on the part of its author.

I have endeavoured to preserve the practical character of the work, and to enhance its usefulness, by adding notes of cases; purposely selecting those of long sufferers from the complaint, and where sufficient time has elapsed to evidence the permanence of the results of treatment.

I have avoided allusion to all unsettled points of professional discussion, but there is added a bibliographical List of Works from which ample information may be obtained on every point connected with the subject of Headaches.

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Part I.

THE VARIETIES AND SYMPTOMS OF HEADACHES.

2

HEADACHES.

PART I.

THE VARIETIES AND SYMPTOMS OF HEADACHES.

1. VERY great is the collective amount of the suffering endured by those who 'never had a day's illness in their lives.'—The strong, broad-shouldered man tortured with the toothache; the clever man a perfect martyr to corns; the well-looking lady who plays, without faltering, her part in the world, whose life is regular as her appearance is healthy, yet on whose brow the attentive observer can detect the worn look of unrest that tells of a headache. These afford but a few illustrations of the many sufferers from the minor evils of life: those lesser miseries which have more to do with folding the furrows in our faces, and ruling the

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wrinkles on our brows, than we are wont to admit.

2. I am well convinced that it is unwise ever to neglect a headache.* It is always a source of annoyance and discomfort to the sufferer ; yet very few, even of those most subject to headaches, ever think of seeking medical aid. And there are none who need it more ; for the pain which they feel not only misleads them as to its true cause, but incapacitates them from judging correctly as to the best means of treatment, in cases where a simple remedy, judiciously employed, would effectually afford relief. Moreover, a headache is often beneficially bestowed as a warning sign (and sometimes the only one the patient notices) of a disease that becomes the more difficult to cure in proportion as the first symptoms are neglected, and which can be removed only by the aid of weapons that none but skilled hands should employ.

* Sir Isaac Newton, when engaged on the theory of lunar irregularities, was compelled to abandon his unremitting study, for "it made his head ache," as "his head had never ached but when studying that subject." He subsequently neglected this warning. And it was after the resumption of his intense application to this abstruse subject that he was afflicted with the severe illness, in 1692, which M. Biot attributes to mental derangement.

3. Thus, although the common sense of an educated person may often lead him to judge rightly whether the simple means at his own disposal are sufficient to afford relief; yet, if rightly guided, it might do more. It might warn him of the risk he often runs in allowing so simple an ailment as a headache to proceed unchecked. It is true that a little knowledge is a dangerous thing: but even this is surely better than the ignorance which blindly betrays to danger.

4. I purpose, in the following pages, to consider briefly, and describe plainly, the varieties of headaches; the causes to which they are due; the symptoms by which they are distinguished; and the modes of treatment to which they are amenable. The synopsis prefixed to these pages contains that classification of the subject which has appeared to me most practical for the purposes of this work, and to most thoroughly comprise all the well-marked varieties of headaches. But there are very many cases which even a far more elaborate division would fail to include; sometimes partaking of the characters of several varieties; sometimes being the result of an unsuspected disease, which has to be removed before the pain in the head can be relieved. The enumeration of

these would be an endless task ; but in that part of the work which treats of the causes and treatment of headaches, I have introduced some cases illustrative of the more common forms of these mixed and symptomatic headaches.

5. HEADACHES occur more frequently in persons of adult life than in extreme youth or advanced age. But in the young and old, as they are the more rare, so are they the more significant, and demand more immediate attention and watchful care. Dwellers in towns are more subject to headaches than those living in the country. They are more frequent in the female, than in the male sex ; in those of nervous and delicate constitutions than in the more robust. Headaches occur more frequently in the middle and higher classes of society than in the lower ; and especially affect persons who neglect the many little attentions and cares that our civilised, and therefore in some measure artificial, mode of life requires. I may especially mention regularity in diet, carefulness in adapting the clothing to the requirements of our variable climate, attention to the action of the bowels, and a sufficient amount of exercise, as essential objects of our care.

6. The headaches that affect the male and female

sex differ in their frequency and intensity ; in their causes, their symptoms, and their effects. There are many causes giving rise to them in the female sex which are due to peculiarities in their organization, &c. The sedentary lives that women generally lead also renders them more liable to headaches.

7. As intensity of thought depends much on the intellectual powers of the thinker, so intensity of pain depends equally upon the capacity for sensation of the sufferer. A beetle trod upon does not in corporal sufferance feel as great a pang as when a giant dies. The delicate scholar or toiler at the desk suffers many days from the pains and penalties whereby he expiates an infringement of the laws of nature ; whilst the hard-headed country squire scarce feels any ill effects on the morning after his debauch. There is no weight and no measure whereby we can gauge the amount of pain ; but it is certain that its intensity in cases of headaches often depends more upon the delicacy of the constitution and the nervous susceptibility than upon the first cause of the pain itself, As the most nicely-adjusted balance is disturbed by the slightest weight, so persons of delicate and nervous habits are most likely to suffer from head-

aches. Hence, females are not only more subject to them, but, as a rule, they suffer more acutely than men would do from the same amount of pain ; and the after effects of the attack are more severe and persistent.

8. The headaches essentially peculiar to the female sex constitute a very large class. They are, for the most part, intimately connected with the different physiological destiny assigned to woman, and the various functional duties of her system from girlhood to age. They aggravate the suffering and complicate the treatment in that long catalogue of complaints included under the name of 'Diseases of Women.' Few estimate correctly how much misery is bound up in this expression. Throughout the periods of pregnancy and lactation the headaches then experienced constantly furnish caution-signals that should not be disregarded. Their occurrence at these periods, and at all times when the pain in the head is the principal source of suffering, will be hereinafter described. But any direct reference to the more serious cases above alluded to would be beyond the purpose of this work, as serving to divert attention from more important objects of care.

9. The difference in intensity and significance

of headaches at the various periods of life naturally suggests the separate consideration of them as they occur in the child, the adult, or the old person.

10. In the young child especially a headache should never be neglected. It often marks a disordered digestion ; and this can never continue long in a growing child (whose very growth depends upon the proper conversion of its food) without serious mischief ensuing. Pain in the head is also one of the most constant of the general symptoms that indicate the approach of those diseases, as scarlet-fever and measles, which usually occur but once in a lifetime ; and that during the period of childhood.

11. But a headache is, moreover, often the only sign noticed by parents of another disease ; one whose insidious approaches the physician watches with intense anxiety, and too often has to regret that its first warnings were unheeded. A child has, mayhap, been pettish and irritable—no uncommon thing with children. Its appetite has failed, or been fickle, and the little one has seemed drowsy and ‘out of sorts ;’—also symptoms common enough to children. But the child complains

of headache ; or, if unable to express its feelings, indicates them plainly enough by burrowing its head in the mother's lap ; by crying when moved ; by placing its hand to its head, which feels hot when touched ; and by the careless manner in which it allows the limbs to remain in an uncomfortable attitude rather than disturb the position of the head in altering its posture. It avoids the light ; and, though young children are unable to wrinkle the forehead, its surface becomes roughened, as it were, into a frown.

12. If these signs be neglected, there soon succeed others which cannot fail to arouse the fears that have slumbered too long and awaken too late. Inattention to its complaints or signs of a headache has cost the life of many a little child. The mother, who sees her little one suffering in the manner above narrated, should not listen to the advice of any old nurse, or other unqualified judge. She should not rest, as she values the life of her child, until it has been seen by the medical attendant. A simple aperient may be administered, the hair cut short, a thin rag steeped in vinegar and water applied to the head, and the lower limbs may be rubbed with a coarse towel till red from the fric-

tion ; but the opinion of a qualified practitioner should, in every case, be obtained as soon as possible.

13. In the years that intervene between childhood and adult life headaches occur less frequently than at any other period. If a healthy boy or girl complain of headache on rising in the morning, its cause may too often be traced to an insufficiently-ventilated sleeping apartment. This should always be especially airy for young persons ; and the common practice of making a number of children sleep together in one room—whether in a close nursery or the long low dormitories of schools—cannot be too forcibly condemned. A frequent cause of much constitutional irritation—of headaches and of other affections—in childhood and youth is the eruption of the secondary or permanent teeth ; especially of those larger and last developed teeth which appear between the ages of nine and fourteen. This point rarely receives the attention it deserves. I believe that an examination of the mouth would, in many cases, account for symptoms which are wrongly attributed to peevishness or perverseness. In the headaches of children, careful inquiry should always be made to ascertain whether the head has been in any way injured

by a fall or blow, or any of those accidents to which children, especially boys, are particularly liable. Such a cause is sometimes difficult to detect. "The child may be too young to describe the accident that has occurred, or holds his tongue for fear of being punished. Servants state what is untrue, for fear of being accused of negligence and dismissed. The symptoms are therefore attributed to the teething, to the approach of some eruptive disease, to worms, &c., and precious time is lost."*

14. Young folks of both sexes, between the ages of twelve and seventeen, especially if they be of studious habits and give promise of an ability above the average, frequently complain of headaches; sometimes persistent, but more often of varying intensity, and accompanied by a sense of lassitude unnatural to youth. They are usually of the kind hereafter to be described as Congestive Headaches. It is too much the custom, through a mistaken confidence or a too fond pride, to allow youths who love their books to satisfy without check their eager thirst for knowledge. To this indulgence may often be traced the weakly frame of the scholar; for the precious time that in youth he should have

* Lallemand, 'Recherches Anatomico-Pathologiques.'

spent in exercise, and in giving stability and strength to his maturing frame, was devoted to his books. That modern system of school-discipline which punishes a boy by increasing his task, and by confining him until it be completed, is often productive of lasting injury to the health. Nor are the headaches which occur at this period of life always free from the peril that attends those of an earlier age. Though the tongue becomes clean and the feverishness abates; though the pulse diminishes and the appetite improves; yet still the pain in the head may remain unabated, and demands a watchful care; for it is often a warning sign of approaching danger.

15. The headaches complained of by boys and girls of studious habits, are nearly always relieved by due attention to the food and to the regular action of the bowels; by the enforcement of exercise in the open air (not riding in a carriage, that is only exercise to aged persons, or to invalids who cannot walk), and by a diminution of the hours of study; to which the hours of the morning should be devoted in preference to those of the evening or night. The readiness with which the schoolboy learns his task in the early morning from the book that he has placed beneath his

pillow, serves to illustrate the propriety of this suggestion. A removal to the sea-side will often be of great service in these cases ; and the morning use of the shower-bath, if it can be borne, will prove beneficial.

16. I shall several times, in the following pages, have to recommend the use of the shower-bath. Let me therefore at once define what is meant by the qualification, "if it can be borne." I think this the more necessary as the shower-bath has deservedly risen in estimation of late. Thirty years ago it was comparatively unknown. Now-a-days there is scarcely a respectable family that has not one or more for the use of its members. And it is well that it should be so, for the continued employment of the shower-bath is as incompatible with effeminacy and feebleness as the continued use of the Turkish bath is incompatible with true manly vigour and energy. A shower-bath should never be used during the occurrence of an attack of diarrhoea or other discharge from the system. When first commencing its employment the water should be tepid, and should fall but a short distance ; whilst sufficient warm water to cover the feet may be placed in the lower part of the apparatus, especially where

the bather is delicate. The towels should be of the roughest that the skin will bear, and should be used freely and briskly; for the criterion of the value of the shower-bath, and the test as to whether it can be borne, is to be found in the re-action that ensues after its use; the presence or absence of that warm and genial glow which pervades the whole surface, and seems to invigorate the whole system. If this re-action do not occur, if the bather remain languid and chilled, with the extremities cold and blue, and the skin rough, with a sensation of fulness in the throat, and of inability to vigorously use the towel or the flesh-brush, then the shower-bath should by no means be continued, for it cannot be borne, and its employment would be attended with positive evil and even danger.

17. I come now to consider the infinite variety of headaches occurring during the middle periods of life; at the time when the frame is in its fullest activity and vigour; when man becomes his own master, and is usually a sad tyrant to himself. Late hours, dissipation, improper food, deficient exercise, and over-taxing the powers of the brain, are then prolific producers of headaches in the male sex, as are insufficient exercise, tight lacing,

injudicious exposure to night air when thinly clad; and last, not least, family cares—in the female sex. In addition to these are many special causes to be mentioned in describing the different varieties of headaches, and particularly considered in the part which treats of their causes and their cure.

18. The contrast is very marked between the headaches of adult life and those which occur in childhood. In the latter this affection is usually of grave import. In the adult the occurrence of a headache, except it be very intense and persistent, and combined with other and more urgent symptoms, seldom affords cause for alarm; and may be relieved, in the majority of instances, by very simple remedies. It must be remembered that the symptoms here enumerated as distinguishing each variety of headache, will seldom be all present in any one instance. They result from the collection and comparison of a large number of cases; and this experience also teaches that headaches, especially those of a milder character, often partake of the symptoms of more than one variety, according to the influence of the causes to which they are due.

19. The frequency of headaches increases in


communities as they advance in civilisation. We therefore find, as might be expected, that those who chiefly benefit by this advancement, who are in fact the children of civilisation, are most subject to headaches. This is especially noticeable in two very opposite varieties of constitution. Firstly, in nervous and hysterical people; secondly, in those who are habitually free livers, whose digestion is constantly strained to the utmost to perform the work given it to do. These two classes represent a large number of the sufferers from headaches; and their very existence is almost necessarily identified with that of a high state of civilisation. No one ever heard of a squaw afflicted with hysterics, or of an epicurean Red Indian. Indeed, I learn from good authority, that among the primitive tribes in North America and in the South Sea Islands, headaches are almost unknown.

20. Persons of a full habit of body, or living well and pursuing employments which prevent their taking a sufficient amount of exercise, are particularly subject to headaches of two kinds, the plethoric and the congestive.

21. PLETHORIC HEADACHES, or those depending on a general fulness of blood, are of two varieties.

The one occasional, of frequent occurrence, but seldom lasting more than a few hours. The other a continuous headache, sometimes enduring for weeks. Both of these occur more frequently in the spring and summer months. Those who suffer from them are often very regular in their diet, this regularity consisting in their habitually living too well. In the younger portion of those who are liable to these headaches, the pain is usually severe and rending, and is felt chiefly on the brows and temples. In older persons it is of a heavy throbbing character ; is more general in its situation, or is referred to the back of the head. Those who suffer from these headaches are usually of stout frame, with the appearance to a casual observer of the most robust health, especially if the sufferer be under forty, for it is in the ten years on either side of this age that plethoric headaches most frequently occur.

22. *The Persistent Headache* of plethoric persons may endure some days, and even weeks. It is accompanied by a sense of fulness and often of throbbing over the brows and temples, with a sensation of dizziness and of mist before the eyes. The sufferer has a fear of exertion, and in fact passively evinces, in every movement, the dread of a rush of



blood to the head. The sleep is usually deep, but the patient awakes unrefreshed. There is thickness of the breathing, with a painful perception or the laboured action of the heart. The appetite is good, though the bowels are generally sluggish. Nature sometimes affords relief by a severe attack of diarrhœa, by the occurrence of bleeding from the nose, or from piles. In fact, persons so suffering often look forward with considerable anxiety to the recurrence of the latter mode of relief. These headaches occur more frequently in the female than in the male sex, especially for a day or two before or at certain periods, at the change of life, and during pregnancy. In addition to the above symptoms there is then constant aching of the temples, with wandering pains and a sense of heaviness in the back and loins, increased by motion.

23. *The Occasional Headache*, which is often a source of great distress to persons of a full habit of body, especially when there is a tendency to gout, occurs most frequently during the night or in the morning, and is much influenced by the weather. It is more common among dwellers in towns than among persons living in the country. It is very dependent, both in its intensity and

duration, on the amount of exercise taken. It is of common occurrence in persons whose occupations necessitate stooping: this always exaggerates the pain, and is followed by slight dizziness on again assuming the erect posture. It is more frequent in the male than in the female sex. It is usually at once brought on by exposure to a vitiated or impure atmosphere, as that of a heated theatre, a close cellar, &c. The bowels are generally costive; the breath short; the appetite good, though very irregular; and the tongue white at its centre and roughened at its root. For the stomach, being irritable, does its work under protest; and there never was, and never will be, a roughened and white furred tongue where there does not exist some corresponding condition of the stomach, to which the state of the tongue is so faithful an index.

24. THE HEADACHE DUE TO CONGESTION is another variety with many local symptoms resembling that of the true plethoric character. In the latter there is an actual excess in the blood itself. The patient lives well, and—as the sensible saying goes—“makes blood rapidly.” Though tortured with headache, he is usually the very picture of health. In the Congestive Headache,

on the other hand, the fault lies in the mechanism of the circulation ; in the deficiency of healthy tone in the system. The sufferer is nervous, delicate and feeble, though seldom thin or slightly made. The skin is pale and sallow ; the expression of the countenance heavy ; the lips pale or bluish ; the hands and feet cold ; the spirits depressed ; and the bowels torpid. The pain is usually referred to one part of the head. The pulse, instead of being strong and firm, and felt at the wrist like a cord drawn tense, is full and large, and easily checked by pressure. The blood, is, in fact, not propelled with sufficient activity and force ; for, as the muscles, which we can feel, are deficient in firmness, so the heart (also a hollow muscle) is deficient in tone. It languidly performs its office of propelling the blood, whilst the vessels inefficiently perform their office of forwarding it by the elastic contraction of their walls, and hence result the wearying dull pain and sense of heaviness and fulness in the head ; the buzzing, singing, or humming noises in the ears, sometimes resembling the roar of the ocean, at others like the humming of bees ; the dizziness of sight ; and the disinclination for exertion as tending to aggravate the suffering by increasing the rapidity of the heart's

beat, without the blood-vessels acquiring any additional power of urging forward their contents. Congestive Headaches are those which most frequently occur when the mind has been over-cultivated, without due attention being paid to the requirements of the body. Earnest conversation, vivid emotions, or excessive anger, will produce a rush of blood to the head, followed by dull oppressive pain, and a sense of coldness in the extremities. In women these headaches are even more common than those of the true plethoric character, and at the same periods.

25. A sudden and acute attack of headache, of any one of the varieties already mentioned, and happening in a person of the habit of body above described, if it be accompanied with giddiness and partial loss of speech, and a sense of numbness in one or other of the extremities, is always attended with danger. It may terminate with a sudden outbreak of singing sounds in the ears ; a tingling of the hands and feet ; a sensation of flushing in the face, and a little unsteadiness in the gait. It may be followed by an intense depression ; a sense of nausea ; and an uncontrollable ejection of the contents of the stomach. But it may directly terminate in an attack of

apoplexy or palsy ; or, if occurring in nervous and hysterical persons, may eventually result in insanity. Those headaches depending on the circulating system, which are so frequent in the decline of life, will be further considered when describing the special varieties that occur in advanced age.

26. Headaches of plethora and congestion are intimately associated, as already noticed, with certain peculiarities of temperament or constitution. Their most prominent symptoms, the throbbing and sense of fulness, naturally direct the attention of the sufferer to the circulation ; for there is an appreciable connection between the cause and effect ; each beat of the heart aggravating the pain ; every motion of the body (as stooping) which tends mechanically to increase the flow of blood to the head, exaggerates the suffering. This manifest dependence of the pain on the cause from which it arises is far less clearly marked in the majority of the headaches included in that large class which next claims our attention.

27. THE HEADACHES DEPENDING ON DERANGEMENT OF THE DIGESTIVE ORGANS for their cause are not confined to any particular age or constitution. They will assuredly happen to the strongest, if the

stomach be taxed beyond its endurance, and those measures neglected which in some degree compensate for want of care or regularity in the diet. There are few persons of adult age who have not, at one time or another, suffered from some derangement of the organs ministering to the digestion and conversion of the food. Indeed, the number is very small, of those living in London or in large towns, who have a clean tongue for one continuous week of their lives.

28. There are very few, moreover, who have not experienced headaches due to indigestion, though not attributed to its influence. For the pain in the head arising from disturbed digestion, whether the stomach, the liver, or the bowels be in fault, is not always accompanied by the distinctive and well-marked symptoms of the bilious and sick headaches. It is true that the pain can often be directly traced to some particular article of food, or to some excess in diet, the influence of which cannot be mistaken. Very frequently, however, the digestion has been for some time deranged; the process being still carried on, not healthily, but without causing inconvenience; for the patient endurance of the stomach is almost incredible. The sufferer can recall no particular irregularity of

diet, and attributes the headache to the weather, or to want of due exercise, or to some other cause whose influence has only been equivalent to that of the proverbial last feather which breaks the camel's back.

29. As indigestion may continue for a long time without the occurrence of a headache, so a headache due to the disorder of the digestive organs by some particular article of food does not always immediately cease when that cause is removed. A simple sympathetic headache may thus become permanent, and remain as an independent affection long after the original symptoms of indigestion have been removed. In general, however, these milder forms of headache are of short duration. Like the more intense bilious and sick headaches, they occur chiefly in early and in middle life; becoming less frequent and less severe as age advances and the irritability of the system is diminished. The same cause, which, in early life, produces a sick or bilious headache, frequently gives rise, in aged people, to an attack of diarrhœa; indeed, younger persons, in whom diarrhœa is easily produced, are seldom subject to dyspeptic headaches.

30. The sensation experienced in the head is rather a feeling of dull weight than of actual pain.

There is great languor and disinclination to exertion of mind or body. The tongue is white in its centre, and of a pale red colour at the tip and edges; in weakly persons its sides are often indented by the teeth. The fingers are cold and numb, there is slight nausea, the pulse is languid and feeble, the sight dim and indistinct, and the eyes ache if employed to read, whilst the attention is with difficulty fixed on the book. These headaches frequently pass away after a brisk walk, or an hour or two of undisturbed repose. They exist in every possible degree, are of most frequent occurrence in persons of delicate digestion on any irregularity of the diet, and in some are almost habitual. They may immediately succeed each principal meal, in which case the duration of the pain seldom exceeds a few hours, and more nearly approaches the sick headache in its character, and the mode of operation of its causes. Sometimes the pain is not felt until several hours have elapsed after taking food; there is an irksome feeling of distension over the brows, with luminous and coloured specks floating before the eyes, and a sense of uneasiness below the ribs. This variety approximates more nearly to the Bilious Headache.

31. Fertile causes of these minor headaches de-

pendent on disturbance of the digestion, are, too close attention to business, over-anxiety, intense study, or anything that keeps the mind long and anxiously on the stretch. The stomach becomes weak from want of exercise, from the constrained posture, from the mind being too constantly engaged, and, frequently, from the hurried and imperfect mastication of the food. And here the mutual dependence of the brain and stomach, and their reaction on one another, are well marked. In the first place, the mental excitement and its collateral evils deranges the stomach, and causes indigestion. The brain is then reacted on, and sympathetic headache results. There are many persons who only suffer from these headaches when they imprudently take certain articles of diet, or too great a variety of food, and who can otherwise bear continual toil of the brain for many hours without experiencing inconvenience.

32. THE SICK HEADACHE has received its compound name in order to express thereby the sensations—constant nausea, and pain in the head—which are the chief sources of suffering during an attack. It is not a complaint of any particular age, sex, season, or constitution; but persons leading sedentary lives, and of costive habits, and

those who are incautious respecting diet, are most subject to it. It is almost confined to the middle years of life, though occasionally met with in the young and old. Persons are often not less sufferers from the means employed to relieve the ailment, than from the headaches themselves. There are particular articles of diet which seldom fail to produce them in certain constitutions ; such as fat meats, melted butter, spices, and rich pastry ; meat pies (combining all these) have been specially described as frequent causes.

33. A sick headache generally commences in the morning on waking from a deep sleep, especially in hot weather, or if sleeping in a close room, and when some irregularity of diet has been committed on the previous day.* There is at first a dull and distressingly oppressive sensation in the head, merging into a severe and heavy (not throbbing) pain in the temples, usually more severe on the left side, and accompanied by a tenderness

* The time usually taken for a meal to pass through the stomach is from two to five hours ; whereas, after leaving that organ, the food (reduced to the consistence of gruel) has to traverse about twenty-six feet of intestine. The irritation, therefore, is probably produced after the food has passed the stomach, and during its presence in the intestines.

and a sense of fulness in the corresponding eye, or extending across the forehead: sometimes it fixes itself over the inner corner of the eyebrow, and in these cases light is especially oppressive. There is a clammy and unpleasant taste in the mouth, the breath is offensive, and the tongue covered with a yellowish-white fur. The sufferer usually desires to be alone, and in the dark. The body is chill, and a sensation is often experienced as of a stream of water trickling down the back. The hands and feet are cold and moist, and the pulse feeble.

34. Accompanying these symptoms there is a depressing sense of sickness at the stomach, with an entire loss of appetite; the nausea being increased by the erect posture, and by moving about. There is usually great flatulence; for the irritating food actually undergoes a species of decomposition. Then—after several ineffectual attacks of retching, which terminate only with shuddering at the nauseous taste in the mouth—vomiting at length supervenes. The stomach is relieved of whatever food it contains, if any has been taken during the day, in an undigested state; but more frequently only a thin glairy fluid of an acrid, sour taste is ejected. During the concussion of

the system produced by vomiting there is considerable pressure exercised on the bowels by the muscles of the abdomen. The alimentary substance is dislodged from the situation where it is producing irritation, and passes on in its appointed course. The pain in the head, though increased during the act of vomiting, subsequently becomes relieved. There remains merely a squeamishness of the stomach, and a general uneasiness and languor which induces a desire for repose ; and after a short sleep, the patient may awake perfectly well, or only a little debilitated, according to the previous condition of the general health.

35. In other cases the vomiting continues, and adds still further to the distress. The acid fluid at first ejected gives place to bile—yellow, nauseous, and bitter ; and with the intense depression that always accompanies its presence in the stomach. This urgent sickness, if allowed to continue unchecked, may go on for two or three hours, until—worn out with the exertion—the sufferer falls asleep, and wakes to comparative ease. Sometimes, however, the vomiting does not supervene at all. The pain in the head then usually becomes worse as the day advances, until

lost in sleep at night; and may even continue during a part of the second day.

36. When a sufferer is restored from the immediate urgency of an attack of sick headache, it is often only again to endure its recurrence in a few days or a few weeks. And in this way many persons spend the great part of their lives, until, "wearied perhaps with ineffectual endeavours, they at length give up all hopes of getting rid of their malady, and think patience must be their only cure."*

37. **BILIOUS HEADACHES** occur generally at an earlier age than sick headaches. They are more frequent during the summer and autumn. Persons of dark complexions with black hair and melancholy dispositions are most subject to them. There are two well-marked varieties of the bilious headache. The first of these (A) is due to an accumulation of bile in the system; the second (B), to an exuberant secretion of that fluid, either actual or relative.

38. *The first variety* (A) is very common to persons who have been long resident in hot climates; to those who lead irregular lives; and to

* Dr. Fothergill.

those who habitually indulge in excess of drinking. The skin is dingy, sallow, and blotched with spots of acne; the spirits miserably depressed; the bowels costive, with great flatulence; and usually there is a dull aching pain on the right shoulder.

39. The headache is chiefly confined to the forehead, eyebrows, and eyelids; with sometimes an accompanying sense of smarting in the eyelids and eyes. The latter appear prominent, and of a yellowish tint, in what should be 'the white of the eye;' this yellowness being often well marked also on the sides of the nose. The tongue is coated with a brown fur, and usually appears cracked in its centre. There is a peculiarly nauseous and bitter taste in the mouth on waking in the morning; for in cases where the liver does not efficiently perform its function, the mucous membrane of the tongue seems to take on a vicarious action, and to produce bile on its surface. There is little or no inclination for food. The patient complains of restless nights and of frightful dreams, is melancholy and despondent, and frequently haunted with an oppressive, undefinable dread; it may sometimes be a general sense of fear, but often it is directed to some special object. It is to this

peculiar condition of the mind that the common name of 'The Vapours' is applied. As a temporary relief to the depression is afforded by the use of stimulants, these are often injudiciously taken ; and they not only exaggerate the symptoms after the immediate fillip afforded by the ardent spirits has lost its effect, but they also add to the suffering by deranging the action of the stomach. Dr. Prout has observed that, in these cases, sudden and entire relief is occasionally experienced ; a peculiar sensation being at the same time felt under the ribs of the right side, sometimes accompanied by an audible clicking sound.

40. *The Bilious Headache due to an excessive action of the liver* (B), and ordinarily known as 'an overflow of bile,' is less continuous than the last variety ; though, during the time of its occurrence, it is accompanied by many of the symptoms above enumerated. But, in addition to these, there is throbbing and rending pain in the head. The skin is hot, and the face suffused. There is often a sense of soreness in the limbs, and a bitter nauseous taste in the mouth. Objects seem dim, and surrounded with luminous haloes, somewhat resembling the plan of a fortification. On attempting to read, the letters appear double, or confused.

There is a feeling of giddiness, which, however, seldom extends further than the mere sensation. The patient may not attempt to move about, because he has a conviction in his mind that he would fall. If this feeling of insecurity be removed by the arm of a companion, he can generally walk without staggering, and derives benefit from the exercise. The appetite is impaired, though an hour's exercise, followed by a moderate meal, often relieves the symptoms ; or if the headache be of such intensity as to produce sickness, and bile is at once ejected from the stomach, this is usually followed by an immediate mitigation of the pain and subsequent return of the appetite.

41. Where this Headache follows two or three hours after a meal—especially if that meal has included articles of an indigestible nature, or the patient has been previously subject to dyspepsia—then, although the symptoms nearly resemble those already detailed, the direct cause of them is somewhat different. For the liver is, in this case, only fulfilling its function of pouring out bile as long as required to do so by the presence of food in the stomach. But the food taken cannot be digested. The stomach is trying in vain to dissolve it, whilst the liver is all the time continuing its action. The

bile consequently soon becomes more than proportionate to the work there is to do, is mixed with the undigested food in the stomach itself, and all the symptoms of an overflow of bile ensue. Hence the relief afforded when the refractory food and the excess of bile are got rid of together by vomiting.

42. NERVOUS HEADACHES, like those depending on derangement of the digestive organs, comprise several varieties, which are distinct and well marked in their symptoms; and include also a large number of a mixed character.

43. In nervous headaches, accompanied with indigestion, it is usually found that the pain in the head has preceded the symptoms of dyspepsia, and is not relieved by their removal. Sometimes the digestion has been previously impaired, and although all immediate traces thereof are passed away, the headache still remains, and seldom fails to again derange the digestive organs. For the sympathy which produces a headache when these are disordered, will also serve to derange them when the nervous system is the direct cause of the pain in the head. There is no result depending on recognised causes of disease which does not, in turn, stand itself in the relation of a cause to other

effects. And in nervous affections this is especially seen.

44. *The ordinary Nervous Headache* most frequently occurs in persons possessing high susceptibility, both mental and physical; whose spirits are variable, easily elevated, and easily depressed; whose tempers are fickle, and their sensibility very great. It need hardly be added, therefore, that Nervous Headaches are more common in the female sex, especially between the ages of fifteen and forty; at the age of greatest susceptibility to moral and physical impressions. They are often sudden in their attack and termination. The pain is usually acute and darting, aggravated by sound or light, with a sensation as if the temples were being pressed together, and a "swimminess" in the head. Some persons become peevish and irritable during the attack; others are dull, languid, and almost constantly yawning. There is sometimes a sense of sinking, with a dread of falling, great despondency, and a restlessness which renders the patient incapable of fixed attention and of physical or mental exertion. These latter symptoms are most marked where there is extreme debility following excesses that exhaust the nervous powers. The pulse is small and feeble, its fre-

quency varying with the least excitement; whilst palpitation of the heart ensues on the slightest exertion. Coldness of the hands and feet is constantly complained of. There is often a short, dry, jerking cough, which occurs on the least excitement or sudden change of temperature. The bowels are usually costive; the sight is dim; and, where the sufferer has long been subject to these headaches, the eyes appear sunken and the countenance wan and careworn. The memory also becomes impaired, and the powers of perception less acute. The headache comes on most frequently in the morning, lasts throughout the day, and abates in the evening. This being probably due to that periodical increase of energy in the brain* and nervous system which recurs every evening, and which relieves most of the diseases characterised by deficiency of force in the system; whilst it exacerbates those of an opposite nature, as fevers, &c.

* It not unfrequently happens that any excitement, or a shock which suddenly arouses the system, relieves the nervous pain. Sauvages tells us, that Homberg cured a Headache of this kind by setting a patient's head on fire. Heberden refers to many instances where women were free from headaches during every pregnancy, though constantly suffering from them at other times.

45. *The Nervous Headache, which is of such frequent occurrence in girls and women of hysterical tendency*, although presenting more or fewer of the foregoing symptoms according to its greater or less severity and duration, has, in addition, certain well-marked peculiarities of its own. It usually comes on suddenly, its commencement being accompanied by spasmodic pain in the abdomen, mounting thence to the throat (where the sensation resembles that of a ball lodged there), and finally reaching the head.

46. With the abdominal pain there is usually excessive flatulence amounting to a sense of distension, this being due to impaired or deficient powers of digestion : and flatulence, in whatever cases it occurs, is injurious ; for it distends the coats of the stomach and bowels, enfeebling their energy, whilst it diminishes their power of action. If the flatulence be followed by eructation, immediate, though only temporary, relief is experienced. This often forms the excuse for the use, and still more frequent abuse, of that lady-like form of dram-drinking, which consists in dissolving in the mouth a lump of sugar moistened with a spirituous stimulant—as Eau-de-Cologne ; a medicinal stimulant—as Sal Volatile ; or a com-

bination of both—as in Spirits of Lavender. The purpose with which these are taken (to communicate an unnatural exaltation to the spirits, and to dispel the uneasy sensations in the stomach) is precisely that which influences the drunkard to swallow his stimulant—gin or brandy; and these only differ from Eau-de-Cologne in the flavouring.* The result is the same whichever be taken—miserable subsequent depression, and aggravation of all the causes of suffering.

47. The sensation of a ball rising in the throat—the ‘globus hystericus’—is one frequently experienced by nervous and hysterical people on the slightest excitement; and when the nervous susceptibility is evidenced otherwise than by the occurrence of a headache.

48. The pain in the head, where it is essentially dependent on that eccentric insanity of the nerves known as ‘hysteria,’ usually presents certain

- * “Observe what ills to nervous females flow,
When the heart flutters and the pulse is low,
If once induced these cordial cups to try,
All feel the ease, and few the danger fly;
For while obtain’d, of drams they’ve all the force,
And when denied, then drams are the resource.”

CRABBE.

distinct characters. It is confined to one small space or to a single spot, frequently over one eye-brow. It is often likened to the sensation of a wedge or nail* driven into the skull, or pressing on the brain, accompanied at times by darting pains; and although it often resembles very closely the headaches which arise from some diseases of the skull, yet its occasional occurrence, the hysterical habits of the patient, and the ready relief afforded by treatment, will not fail to sufficiently distinguish it.

49. *The headaches that accompany excessive debility* from any exhausting drain on the system, —as great loss of blood, &c., over-suckling or prolonged diarrhœa,—are most nearly allied to the nervous headaches, and are also of most frequent occurrence in the female sex. The cheeks are blanched, and the lips pale, there is a dark halo round the sunken eye, the sight is impaired, the

* Hence the Latin name of 'clavus,' a nail. The first use of this term is erroneously ascribed to Sydenham. It was commonly employed three centuries before he was born.—"Where the pain is confined to one spot, it is called 'clavus,' and folks believe that they have been bewitched, since it seems to them that they are pricked with nails and needles."—Bernh. Gordonius, *Lilium Medicinæ* (1305), p. 2, c. X.

legs swell if allowed to hang down, and the whole frame is greatly wasted and debilitated. The pain is generally referred to the top of the head, and is frequently described as resembling a 'ticking,' or the beating of a small hammer on the skull.

50. *Hemicrania*.—There is a well-marked form of the Nervous Headache, but in no way peculiar to persons of nervous disposition, that equally affects both sexes when occurring in its most severe form. Its common name is 'Brow-ague,' its scientific appellation '*Hemicrania*.' It is most frequent during the spring and autumn, prevails especially in damp and marshy districts, and is often brought on by exposure to cold and moisture. It is intermittent in its character; in this, as in its causes and mode of cure, bearing a striking resemblance to *ague*. The duration of each attack varies from six to twenty-four hours. It is most common in middle life; rarely occurs in childhood and ceases with advancing age. It sometimes depends on the local irritation of a nerve by a decayed tooth, or other cause; and, in some cases, seems to be hereditary.

51. A modification of this variety of headache, presenting to a certain extent the same symptoms,

is that known by the English name of 'Megrims.*' This is more frequent in the female sex. Though often dependent on the same cause as the true 'Brow-ague,' it frequently occurs as a result of anything that tends to debilitate the frame or exhaust the nervous energy: as protracted watching, over-nursing a child, anxiety and distress of mind, disordered digestion, &c.

52. In both Megrims and Brow-ague, the pain is of an intermittent character, and is distinguished by the regularity of its accessions. These may be of daily occurrence, returning in the morning or at noon; but in some cases they recur only at intervals of a fortnight, or even longer.† The pain is often acute, and resembles that of *tic-dououreux*, from which it may be distinguished by the regularity of its paroxysms, and by the freedom from tenderness of the affected part during the periods of intermission. The pain in Megrims usually

* From the old French word 'Migraine,' itself a corruption of the Greek *Πικράνια*, and Latinised into 'migrena.' (Lor. Joubert, 'Opera Latina.')

† Perhaps the most singular case of periodic headache on record, is that of the well-known French author, Marmontel. He suffered from a pain over the eyebrows for seven successive years for fifteen days in each year, and four hours in each day.

commences at the inner angle of the eye, extending towards the nose; the parts affected feeling sore and appearing red, the eye-ball itself being very tender. The Brow-ague usually commences with uneasy feelings and a creeping sensation over the scalp. The hair is sometimes elevated over the painful part. The pain, which differs greatly in the degree of its intensity, and is accompanied by excessive tenderness, usually affects only one side, and frequently involves one entire half of the head. It often extends to the eye of the corresponding side, which appears contracted and runs over with tears. Light and noise increase the pain, which is often described as resembling 'an opening and shutting of the skull.' In rare instances it has been found that a splitting of the skull by separation of its bones has actually taken place during the agony of the pain.*

53. Many persons suffer from severe headaches only during the prevalence of a north or north-east wind. These attacks seem, in the character of their pain and their mode of origin,

* Dans les douleurs invétérées les sutures s'écartent quelquefois comme on l'a observé au brâne du scavant M. Pascal après son décès." (*Palpin, Anat. Chir.*, vol. i, p. 49.) A collection of such cases will be found in *Stalp. v. d. Wiel, c. I.*

to hold a mid place between Megrims and Brow-ague. The pain, in general, affects only one side of the face and head. It often periodically occurs at certain periods as long as the wind sets in the obnoxious quarter.

54. RHEUMATIC HEADACHES are of most frequent occurrence in persons who have been previously subject to rheumatism, and usually ensue after exposure to cold, or if the head be uncovered when perspiring. The pain particularly affects the brow, the back of the head, or the temples. It is often preceded by a sense of coldness over the head and face. Sometimes it remains constant to one place; at others it shifts from the forehead to the back of the head, extends to the face, and implicates the teeth; or even affects the muscles of the neck and shoulder. The pain is in all cases dull and aching, rather resembling intense soreness than actual pain. There is no throbbing of the temples, though each wave of blood is often felt to aggravate the pain. This is due to the increased susceptibility of the affected structure through which the blood-vessels pass. There is excessive tenderness on pressure of the painful part; the skin of which is probably moist, though not hotter than natural;

indeed the sensation usually complained of is one of coldness, and relief is experienced from warm applications. The headache is generally worse in the evening, and better in the morning. The appetite is seldom affected, and very rarely is the pain of such intensity as to distract the thoughts or impair the powers of attention. It lasts longer, and is more likely to recur in persons of full habit of body. It occasionally happens that, at the time when the pain is most intense, there are superadded giddiness, drowsiness, throbbing, and other symptoms denoting implication of the structures internal as well as external to the skull. These cases demand immediate attention and active and decided treatment; for the headache is no longer a simple ailment, or one that may be disregarded with impunity.

GOUTY HEADACHES. Severe pain in the head usually forms one of the symptoms that presage or accompany a "fit of the gout." In the earlier periods of the disease, whilst yet the constitutional strength is unimpaired, the suffering in the head is more severe than in subsequent years, when the system has been enfeebled by frequent

attacks ; and when, with little or no premonitory warning of its approach—

“Thro’ every joint the thrilling anguish pours,”

“And gnaws, and burns, and tortures, and devours.”*

But there is another form of headache occurring in persons of gouty constitution that demands attention, especially as it has not hitherto attracted much observation. I believe that it comprises many of those intractable and persistent cases of headache which resist all treatment, until this constitutional tendency is recognised.

A century ago, the relative mortality from gout in London was four times greater than at present, and the gradual diminution, of late years, in the number of persons afflicted with the actual paroxysmal disease, is a point on which all observers agree. The more exact knowledge afforded by late researches, justifies our attributing much of this improvement to the difference in habits and mode of living of that class of society to which the malady was chiefly confined. Gout has

* There is not a more exact description extant of the pains and progress of gout than in the fragmentary Greek play in which these lines occur. Yet Lucian wrote sixteen hundred years ago.

been for centuries recognised as one of the best-marked of the hereditary diseases, descending as an heir-loom, from father to son. But the diminished frequency of the disease would lead us to believe (and observation supports the conclusion), that there are now many persons free from actual gout, whose ancestors suffered from it for generations. In them the disease may be said to be wearing out. They are free from the severe attacks, because the hereditary disposition is less strong, or because less vantage ground is afforded to it by indolence and indulgence. They suffer at intervals from the general symptoms that were formerly indicative of a coming attack, but these never culminate to a paroxysm of gout. Enfeebled digestion and an impaired action of the kidneys are frequently present; and, accompanying these symptoms, or even without their notable occurrence, may happen that form of gouty headache, the history of which I have thus endeavoured to trace. It is close akin to the true dyspeptic headache, but is not accompanied by that general feebleness so frequently present after long continued dyspepsia. The attacks occur at irregular periods, often independent of any recognisable

cause, and occasionally they become almost periodic. Several members of a family are often similarly affected. The pain is not acute, but dull and continuous, with considerable tenderness over the aching part. There are no distinctive characters in the pain by which these attacks can be distinguished from those mixed headaches of such frequent occurrence, wherein the symptoms of two or more of the kinds already described are variously combined. But the previous history, and the characters of the urinary reaction, afford important help towards a right diagnosis.

56. ORGANIC HEADACHES. *Those in which the head itself is the seat of actual disease.* Our knowledge is more precise concerning the headaches that owe their origin to sympathetic causes, than it is concerning those which directly depend on disease of the head itself—that is, of the brain, its enveloping membranes, or the bony skull. It is, in fact, more difficult to explain how disease of the brain produces headache than that of any other organ, for the brain itself is perfectly insensible.* Not unfrequently there is

* This was well seen in a case of great interest (related by Mons. Pierguin in the 'Journal des Progrès') where the brain was

disease which leads to structural changes of the marked character within the head, whilst the whole progress of the disorder may be entirely unaccompanied by pain. And diseases of the brain are the more deceptive and dangerous, in that they often give rise to those very symptoms of indigestion or of general debility which are themselves so frequently the causes of headaches, where they exist alone in the system. The temporary relief afforded when the headache becomes ameliorated, or is removed under treatment, may thus mislead; for the disease of the brain, having no direct connexion with the pain in the head, remains therefore unalleviated. Though in other varieties of headache the patient voluntarily seeks

exposed by disease. The patient was a woman. "When seated," he writes, "we entered into a conversation with her on some topic that might fix her attention. The moment she became engrossed and interested, the movement of the brain became at once stronger and more rapid. Pressure was now applied upon the brain as strongly as possible, and in an instant the patient lost the use of all her senses, and ceased to speak; terminating the conversation suddenly in the middle of a word, which she finished when we removed the compression. The different experiments were not only unattended with the slightest pain, but were unknown to the patient, who never perceived the interruption to her intellectual existence which we thus occasioned at will."

quiet both physical and mental, yet his intellectual and bodily powers are unimpaired. When, therefore, there are combined with the pain in the head brief attacks of unconsciousness or want of power in the limbs, these symptoms should never be disregarded.

57. The headache, although directly dependent on disease of the brain or skull, is not at all an index of the extent of that disease ; but frequently it is the only obtrusive symptom in the early stages of diseases of the head, at the period when there is most chance of effecting any good by treatment ; and it may remain for a long time unaccompanied by any more prominent symptoms. Its early recognition is, therefore, of great moment ; and its occurrence is important, for it presents many characters that greatly assist the judgment in endeavouring to arrive at a correct decision concerning the nature of the disease. At its first commencement there is sometimes no complaint of a Headache at all, but merely of a fixed uneasiness in the head, not amounting to actual pain. When, however, pain does occur, it is usually more fixed, deep-seated, and unchangingly persistent in its character, than in other varieties of headaches. It is more obviously in-

creased by mental application, or by bodily fatigue; by close or heated rooms, by stooping, and by strong efforts of expiration. It is not so much affected by any change in the state of the digestive organs, and is generally more intense after sleep. Cheerful conversation, which rather relieves an ordinary headache, becomes laborious and insupportable in cases of organic headache. Stimulants, as wine, &c., produce an immediate aggravation of the pain. In more advanced stages, the slightest motion of the head will often be productive of suffering, or induce the vomiting that is always so grave a symptom in diseases of the brain. This intense vomiting may be distinguished from that which accompanies Sick Headaches, by its independence of any error in the diet or affection of the stomach (which is often perfectly healthy), and by its occurring when the pain is most severe, although it affords no relief.

58. When the membranes of the brain are the seat of disease there is usually intense pain. This occasionally assumes an intermittent character, and affects only one side of the head. It may therefore be mistaken for the true Brow-ague. But its dependence on some local cause, as disease of the internal ear, or the presence of the

decided symptoms which usually usher in and attend the progress of diseases of the membranes of the brain, in addition to the absence of the special causes that give rise to Brow-ague, will readily enough distinguish the two affections.

59. The symptoms that subsequently ensue as the disease of the head progresses, are little likely to be mistaken; when headache becomes a less prominent cause of suffering, or altogether ceases, and when decided indications of pressure or inflammation manifest themselves. The powers of the mind become gradually enfeebled, and finally convulsions, epilepsy, paralysis, or imbecility, indicate the terrible progress of the disease.

60. There is a rare variety of headache, minutely described by Ploucquet and Sauvage, where the eggs of insects have found ingress through the nostrils, and lodged in the cavities which exist in the bones of the face and forehead.* In these cases there is a fixed pain across the eyebrows and at the root of the nose. The eyelid of one side is contracted, and the eye itself red and watery. There is dryness of the nostril on the same side,

* Both Tulpus and Hildanus gives engravings of formidable-looking grubs that emerged from the nostrils of patients who had been long suffering from Headaches.

and frequent sneezing, with restlessness and occasional giddiness. Sheep so affected run wildly about, and roll themselves on the ground.

61. Though HEADACHES IN PERSONS OF ADVANCED YEARS are of less frequent occurrence than in youth or middle life, their importance and significance are proportionally greater, especially when they are first felt in old age. For the causes which give rise to so large a number of the transient headaches in adults, as dyspepsia and nervous irritability, for the most part lose their influence in age. The susceptibility to nervous impressions, whether of mind or body, diminishes with the advance of life, and wisely ordered is that callous indifference which only remains in extreme old age; for the weakened frame and worn-out intellectual energy would be all unable to bear the sharp bodily pain or acute mental anguish over which man, in his strength, rises triumphant.

62. In advanced life the stomach is less irritable, though the food submitted to it is often excessive in quantity and seldom properly masticated. The bowels also are more tolerant, though the food often reaches them in an ill-digested condition. Where irritation from this cause does ensue, it usually results in an attack of diarrhoea.

in place of the Dyspeptic or Sick Headache which would have inevitably accrued in youth or middle age. When, therefore, a headache occurs in advanced life, it is due to no trivial nervous sympathy, and thus the path becomes far more open to form a correct judgment of the true cause of the pain. And it must be remembered that age, as influencing disease, is not to be measured altogether by number of years, but in part by the condition of the physical and mental powers. This is recognised by the Life Assurance Offices, which are often compelled to refuse a policy on a life free from any actual disease, excepting at a higher rate than is warranted by the years of the insurer. Many a man at fifty is more worn, and presents more of the special characters of declining life, than another at three score years and ten, whose age "is as a lusty winter, frosty but kindly," on whose heart Time hath laid his hand—

‘ But as a harper lays his open palm
Upon his harp—to deaden its vibration.’

64. During the years that herald the decline of life, when the first impressions of old age are stamped upon the frame ; whilst they—

‘ Not once perceive they’re growing old,
Nor think of Death as near ;’

when the failing strength is unequal to the accustomed work and is over-tasked in endeavouring to perform it; the headaches of most frequent occurrence are those of the kinds already described as depending on the circulation; Headaches of Plethora and Congestion. But in advancing life there is associated with headaches of this nature a greater danger of a far more serious disease, namely, apoplexy; for the wear and tear of the system is no longer repaired with the ceaseless activity evinced in youth and middle age. The vessels of the brain are unable to resist the pressure of an increase of blood in their canals; they have lost their elasticity, and it is fortunate if their over-fulness afford timely warning before the distended vessels give way, and effusion of blood takes place into the substance of the brain.

65. *The symptoms of Plethoric Headache* already enumerated are modified by the diminution of power that attends the decline of life. The force of the circulation, the throbbing of the temples, and the intensity of the pain are lessened. The face is red, becoming flushed on the slightest exertion, and frequently has patches of a florid hue on the cheeks and forehead; the nose is of purplish colour; the eyes suffused, and the veins of the

temples distended. There is a growing disinclination to exertion, and dulling of the faculties ; whilst the full portly figure becomes fat and flabby. There is occasional giddiness, especially on stooping or suddenly looking up to the sky. The bowels are sluggish, though the appetite continues good. But there is a drowsiness after meals, with, frequently, an indistinctness of articulation on waking ; and the occurrence of this latter symptom, especially if it be also observed when the headache is most severe, should never be lightly passed over.

66. *The Congestive Headache* is of frequent occurrence both on the confines of age and throughout the years of waning life. Old persons of thin and spare frames suffer equally with those who are more robust from Congestive Headaches ; for they are due to a diminution of power in the vessels by which the blood is propelled, or to some obstruction to the free flow of its current, and its consequent tendency to stagnation. They are frequent in those who, during middle life, have been subject to Sick Headaches. The patient has often suddenly sunk into the weakness of old age, rapidly losing flesh, vigour, and strength. The veins of the legs swell on walking, the face is pallid, the pulse feeble, the hands cold and clammy, the

sleep unrefreshing, and there is often a complaint of weakness in the joints. There is a tendency to fainting, especially on any sudden change of temperature. The pain in the head is often likened to the sensation of an iron band constricting the forehead, and is frequently associated with recurring attacks of giddiness. There is great cause for anxiety when to these symptoms are superadded the occurrence of imperfection in speech and indistinctness of utterance, sudden sickness and fainting, often preceded by a stumbling and uncertainty in the gait from deficiency of nervous power on one side of the body; this side having been previously noticed to become sooner chilled on a cold day.

67. The approach of an insidious disease of the brain, which especially occurs in advanced life, and has, of late years, attracted much attention, is often marked by symptoms of headache nearly resembling those already described. I refer to Softening of the Brain.* When acute in its attack the symptoms at once arouse anxiety and excite alarm; but in its chronic form it may pursue an insidious course for a long time unnoticed. In

* The frequency of this disease at different periods of life has been thus calculated from cases recorded by numerous observers ;

addition to that failing of the mental and physical powers which accompanies old age, and in addition to frequent giddiness and headache, usually most severe across the forehead, there are various uneasy sensations experienced in the limbs; constantly recurring numbness; frequent cramps, or a sensation as of insects crawling on the skin. The temper becomes irritable and pettish, as in the head-ailments of the first childhood. The speech is often confused; inappropriate words being unconsciously used, and things called by their wrong names. An arc of pearly white tint often appears in the eye above and below the coloured iris, gradually surrounding and forming a kind of frame to it. The power of firmly grasping objects in the hand is lost; the lower limbs no longer obey the

the whole population is assumed to be 20,000, about one half of whom die before the age of 20.

Age.	Number of cases of softening of the Brain.	Population at this age.	Proportion of cases per 1000.
20 to 30	18	3000	6.0
30 to 40	14	2500	5.6
40 to 50	28	1800	15.5
50 to 60	33	1300	25.4
60 to 70	50	1000	50.0
70 to 80	64	500	128.0
80 and upwards.	14	200	70.0

will, are cold and rapidly become wasted, sometimes being slowly drawn up and remaining permanently contracted. Other and more grave symptoms gradually supervene, unmistakeably marking the progress of the disease; and very pitiable is the condition into which the sufferer sinks before death finally closes the scene.

68. The difficulties and dangers which surround the diseases of advanced life are in great part due to the deficiency of that conservative vital power which, by its struggle to maintain the equilibrium of health, affords so important a guide in the diseases of youth and of middle life. In the latter the diseases of the enclosing membranes of the brain present symptoms that are little likely to be overlooked. But in old age their approach is often masked or obscure; and thus symptoms of great moment may be neglected until too late. The patient complains fretfully of a headache; is dull and stupid in the morning, becoming peevish as the day advances, with the head hot and the tongue dry and brown. Questions are often incoherently answered; and the sufferer, being early put to bed, is sometimes found unconsciously wandering about the bed-room at night. These signs, and the querulous complaints of constant

pain in the head, are probably attributed to the failing of the faculties, or considered as incidents natural to the ebb of life ; until total loss of sensibility, and a sleep that is only broken by death, too late points out the fatal error.

69. The foregoing descriptions are only intended to include those cases wherein the headache is the chief source of suffering. There is no species of fever, and scarcely any kind of inflammation, which is not accompanied by a headache. It is of constant occurrence in every case of disease of the alimentary canal,* and the presence of any irritation, as that produced by worms,† frequently gives rise to the most intense pain in the head. There are certain headaches peculiar to particular trades and occupations. Inflammation of the eye or ear, or the presence of foreign bodies in either of them ; the cutting a wisdom tooth, or any disease of the upper double teeth ; may be, and usually are, accompanied with more or less of headache. In

* The sufferings of Napoleon Bonaparte were greatly enhanced by the severity of the headache that accompanied the disease of the stomach, from which he died.

† Hoffmann relates a case where a patient suffered for four years from a headache, due to the presence of worms in the alimentary canal ; the true cause of the pain never being once suspected.

diseases of the heart, of the kidneys, and other organs, continuous headache often arouses suspicions that lead to the discovery of the true source of suffering. But in all these cases the pain in the head is only secondary in degree; or is so intimately bound up with other and more serious disease, that its consideration falls not within the scope of these pages.

Part II.

HEADACHES: THEIR CAUSES AND CURE.

PART II.

THE CAUSES AND TREATMENT OF HEADACHES.

70. HAVING described the varieties of headaches, and the distinguishing features of each, I proceed to point out the causes to which the symptoms and signs enumerated are due. The kinds of headaches being known, the influence of various causes in their production will be more clearly recognised, and the description of the means best adapted to relieve them will be more readily understood.

71. In the majority of headaches—where they are themselves the chief sources of suffering, and not merely the symptoms of other and graver diseases—the causes are twofold. Those which render a person susceptible to suffer—or predisposing causes; and those which directly bring on the pain, and to which it is usually attributed—or exciting causes. In well-marked instances the

different kinds of headache already enumerated are not more distinct than the causes on which they depend. But it far more frequently happens that a headache partakes of the characters of more than one of the particular varieties described, and that the causes are similarly modified. Thus the intensity of the headache resulting from excess often depends as much on the wild excitement of the drunkard, and the consequent nervous depression from reaction, as on the injury done to the stomach by the stimulants imbibed.

72. Where a headache is of this mixed character, it is the more difficult to appreciate the effect of different causes, as the result of one only serves to aggravate the influence of the rest. Thus, intense mental application produces headache; but it also, pretty surely, leads to evident disorder of the digestive organs, itself a fertile cause of pain in the head. And frequently the causes and their results become still more tangled. The digestion is slightly impaired,—producing a trifling dyspeptic headache; the mind is unoccupied, or unhealthily employed,—giving rise to a little nervous headache; and the amount of exercise taken is small,—a slight congestive headache being the consequence. Many persons, especially females, and

mostly those who enjoy the comforts of life, suffer from headaches of this mixed character. They pore over the tambour-frame, or the contents of the circulating library, from sheer want of better employment, till the head aches, the sight becomes dim as though a cloud had obscured the light, and the mind is lost in a painful and confused reverie. When courage can be mustered to ring the bell, a cup of strong tea is ordered; and, before it arrives, a dose of ether or ammonia is probably taken. Day by day this kind of life is led, until at length the digestive organs are disordered, the tone and energy of the mind diminished, and the powers of the system enfeebled for want of fitting exercise, of proper mental employment, and of regular diet.

73. It was with the object of more nearly and more clearly contrasting the various symptoms which mark the different kinds of headache that the classification in the First Part was chosen. I purpose pursuing the same arrangement in describing the causes and treatment: considering first those varieties which directly depend upon the circulation of the blood—Headaches of Plethora and Congestion: next those due to some derangement of the Digestive organs—Dyspeptic,

Sick, and Bilious Headaches : and lastly, those dependent on the nervous system, or on local disease—Brow-ague, Organic Headaches, &c.

74. In describing the characteristics of the several varieties of headaches, the more important causes were cursorily mentioned in order to trace their connection with the effects due to them. The re-enumeration of these causes in the part specially devoted to their consideration, even if it appear like needless repetition, will serve more clearly to denote their respective importance, and mark their relative value. Moreover, the several influence of the predisposing and exciting causes in each variety of headache requires that these should be separately considered ; whilst the importance of care in diet and regimen as much demand attention when describing the treatment as do the kinds of medicines most suitable. For in proportion as the causes become tangled and intermixed, so the treatment (whether dietetic or medicinal) requires to be modified according to the variation and relative influence of the causes to which the pain is due.

75. THE CAUSES AND TREATMENT OF HEADACHES FROM OVERFULNESS OF BLOOD. I have already endeavoured to mark the distinction between the

symptoms of the headaches which arise from a general repletion of the circulating system, *i. e.* Plethoric Headaches; and of those in which the overfulness is confined to the head itself, *i. e.* Congestive Headaches. In plethoric persons the whole system is in an energetic state of health. The appetite is correspondingly great, whilst the large supply of material thus introduced into the circulation is not expended by the body; either in exercise—as is necessitated in cold climates, or by an excessive action of the skin—as occurs in hot countries. The whole system of blood-vessels is thus working at high pressure. The effects of this plethora are of course most felt where the vessels are weakest, and least able to resist the force of the current of blood. This is especially seen in the Brain, which, with its investing membranes, is computed to receive one fifth of all the blood contained in the body. The blood-vessels here are not only weaker in structure than those of any other part, but, moreover, they derive no support, as other vessels do, from the elastic pressure of surrounding muscles. When, therefore, the rapidity of the general circulation is enhanced by exercise, the effect is virtually the same as when the stream of blood that flows to the head is mechani-

cally influenced by stooping. Giddiness, fulness, and throbbing ensue ; for the vessels of the brain are strained to the limits of their endurance, and these are their signals of distress.

76. It will hence be apparent that whatever increases the natural tendency to repletion, produces a predisposition to suffer from plethoric headaches ; whatever accelerates the flow of blood towards the head, or retards its passage from the brain, acts as an exciting cause, which need only be very slight where the predisposition is strong, and *vice versâ*. The habit of body, and age of the patient, high living, indolence of mind and body, with insufficient exercise, over-indulgence in sleep, wearing too much clothing, long thick hair, &c., may be enumerated as frequent predisposing causes. Deprivation of the sense of sight, also, I believe, establishes a predisposition to the occurrence of Headaches dependent on the circulation—plethoric or congestive, according to the physical character of the sufferer. The change of habits, despondency, and deprivation of the stimulus of light, all assist towards this result. Moreover, the blind seldom take much active exercise, and maintain a peculiar stillness when unemployed, an absence of that almost continuous series of minute

muscular movements which are half involuntarily performed by a person in whom sight is perfect.*

77. The exciting causes—those which immediately produce the headache—are far more numerous. Chief among them may be noticed, the suppression of any accustomed discharge, excess in eating and drinking, a stooping posture, or

* I have notes of several cases occurring in blind persons; the following will illustrate a common error into which they frequently fall:

CASE I.—A stout, florid man, æt. 58, totally blind for upwards of twenty years, came under my care in 1857. Enjoyed perfect health until he lost his sight. Since then he has suffered from frequent headaches of plethoric character, accompanied, of late years, with vertigo, and so increased by change of posture that *he has avoided taking exercise for fear of producing an attack of the pain*. His appetite was good, bowels active, tongue large and white, liver congested, and pulse very full and resistant. Ordered Magnes. Sulph., ʒiiss; Sodæ Phosphas, ʒj; Ext. Taraxici, ʒj; Aquæ, ʒas; bis die, with a dose of Sulphate of Manganese in the morning [formula 32]. When the bowels were freely relieved and their regularity established, a powder with the Sulphate of Magnesia (ʒj), of Manganese (ʒj), and of Quinine (gr. 1), was ordered each morning, exercise enjoined, the diet carefully regulated, and a stream of cold water from a hand shower-bath ordered to be applied to the head. Under this treatment he has remained comparatively free from his ailment for two years, only taking the powder occasionally in the morning.

frequent alternations of the erect and recumbent position ; unwonted exposure to the sun with the head uncovered ; any unusual strain on the powers of the mind, vivid emotions, or mental excitement, especially fits of passion ; impure air, as in cellars, &c. ; and, above all, that sudden arrest or diminution of the action of the skin which results from imprudent exposure to cold, or to a moist condition of the atmosphere. This effect might be anticipated when it is remembered that every alteration of an inch in the mercury of the barometer adds, or removes, a weight of 1080 pounds from the average weight which the body of a man of mean stature sustains. The results of any sudden alteration of this pressure are abundantly evidenced in the frequency of apoplexy, headaches, and other diseases, when the barometer is subject to great and rapid variations. But the human frame can habituate itself to very different degrees of atmospheric pressure. On the summit of Mont Blanc the famous Saussure had hardly strength to consult his instruments ; whilst at a height scarce inferior to this in South America, young girls dance for a whole night without being extraordinarily fatigued. The influence of barometrical changes is even more marked in animals than in man ; indeed, their ac-

tions are often regarded as indications of the probable condition of the weather.*

78. In the Treatment of Plethoric Headaches the employment of medicines should be as far as possible dispensed with. They should only be resorted to when the necessities of business prevent, or the solicitations of indolence interfere with, a strict control over the diet and regimen. In these cases a saline diuretic [formula 30], taken twice a day ; and an occasional aperient at night [formula 35], followed by a sedlitz powder in the morning, seldom fail to afford great benefit when persevered in.

79. Persons subject to Plethoric Headaches should not partake of animal food more than once a day, and even then should let fish and vegetables form a principal part of the meal. The appetite should never be indulged to satiety. Beer, spirits, coffee, and all stimulating beverages should be avoided, or very sparingly taken. The head may be freely bathed at night, and elevated on a hard pillow during sleep. The bed-room should be airy ; and, as the more nourishing articles of diet are to be carefully restricted, so also over-indulgence in

* " When rain depends, the pensive cat gives o'er
Her frolics, and pursues her tail no more."—SWIFT.

sleep, "the chief nourisher in life's feast," is to be avoided. As soon as the brain is thoroughly awake it is time to rise; otherwise the thoughts become active, and all intense thinking, when in the recumbent posture, tends to produce congestion of the head, and causes it to ache.

80. Drowsiness after dinner (if no extraordinary fatigue has been undergone, or the night-rest not been disturbed) is a sign of having eaten too heartily. It is best avoided altogether;* but, if indulged, it is better to sleep upright in a chair than to repose on a sofa. In the former position the sleep is generally short, and never very profound; but when the whole body is recumbent, and the stomach full, the sleep is heavy, prolonged and accompanied with snoring. The person who thus indulges awakes drowsy and unrefreshed, with a sense of fulness and weight in the head, with the eyes red and painfully sensible to light, and the body chilled and very susceptible to cold.

81. Exercise in the open air should be regularly

* The hint afforded in the following extract might be advantageously borne in mind: "Til eschajp the euil accidentis that succedis fra the onnatural dais sleep, as caterris, Hedeuerkis (Headaches) and indigestione, I thoct it necessair till exerce me with sum actyue recreatione."—*Compl. s. p. 56.*

taken, but all violent exertion or sudden change of posture should be carefully avoided. The clothing should be, as far as possible, accommodated to the season, and hot close rooms guarded against. The hair should be kept short. It has been observed that monks who neglect shaving their heads, after having once habituated themselves to do so, suffer severely from headaches.

82. The bleeding at the nose which sometimes occurs, should not be too suddenly checked, as it often affords a salutary relief. When the patient has been imprudently exposed to cold, and the headache comes on severely at night, with the head hot, and the skin harsh and dry, a sudorific with antimony [formula 20], taken at bed time, is often of great service ; the body being kept warm during its action.

83. Plethoric Headaches, with a sense of throbbing or of fulness, and a feeling of drowsiness, often prove troublesome to pregnant women, although not necessarily of a full habit of body. It was formerly much the custom to recommend bloodletting under these circumstances. A more enlightened physiology has now proved, that in none but the most urgent cases is bleeding admissible during pregnancy, for the perfection of the

frame of the child depends upon an abundant and constant supply of rich blood in the system of the mother. These cases are usually greatly relieved by the use of saline medicines [formula 36] ; the occasional employment of gentle and unirritating aperients, as castor-oil, and the avoidance, as far as possible, of fluids. Sea-air, and sponging the body with tepid salt water, generally prove beneficial.

84. THE HEADACHES OF CONGESTION are directly due to an increase of the quantity of blood in the brain, usually combined with a deterioration of its quality. This increased quantity is not accompanied by any corresponding repletion of the vessels of the rest of the body, whose natural fulness is, on the contrary, often rather diminished. The congestion of the head is due to the triumph of physical over vital force. The stream of the blood having the same tendency to stagnation as a current of any other fluid.

85. The congestion may be due either to a diminution of the propelling power, as in very thin and weakly persons ; or to a want of tone, of active elasticity, in the vessels whose office it is to aid the propulsion of the blood by their contraction on the contained stream, as often occurs in stout, heavy people of feeble strength and broken-down

constitutions; in women who have borne many children; and in men who have lived dissipated lives.

86. Congestive headaches often follow attacks of fever, or of any disease which much enfeebles the system, and may continue for a long period. They are frequently brought on by the inhalation of impure air, as in crowded rooms; by the employment of narcotics; or by any stricture that interferes with the freedom of the circulation, as tight neckcloths, the use of stays, &c. They often succeed the urgency of an attack of asthma, or of a fit of hooping-cough. Those who play much on wind-instruments frequently suffer from them. Prolonged mental occupation, and a low posture of the head, are also fertile causes, especially in advanced life.

87. The precautions already suggested (when treating of Plethoric Headaches) in reference to sleep, exercise and clothing, should be observed in cases of Congestive Headache. The diet should be light and nutritious; care being taken that the stomach is not at any time overloaded. The meals should be regular; animal food is requisite once a day at least, and all watery vegetables should be avoided. Fat, and all things of an oily

nature, as butter, &c., should be very sparingly used, and a glass or two of good wine, according to the degree of debility, be daily taken.

88. The coldness of the feet and hands so much complained of, is best remedied by wearing gloves and hose of wool, and other materials which are bad conductors of heat from the body. Friction and exercise are invaluable where they can be employed, and should as far as possible supersede the habit of warming the extremities at the fire. It is advisable never to retire at night with the feet cold; or the hot-water bottle may be used after getting into bed, taking care, however, that it is removed as soon as its purpose has been fulfilled. Fresh air, gentle exercise, and cheerful society are important advantages if they can be obtained.

89. The aperients so frequently required by persons who suffer from Congestive Headaches, should be cordial and saline [formula 47], and adapted to the age and constitutional powers of the patient. The bowels should act once every day, or every other day, according to the amount of food, the habits, &c., and the aperient be taken on any deficiency of regularity. A mixture that combines a tonic and gentle stimulant often proves

very beneficial. And there are no medicines so invariably useful in cases of Congestive Headache, attended with debility, after establishing a regular action of the bowels and due regulation of the diet, as the preparations of iron. In cases where there exists great debility, the ordinary compound iron mixture of the Pharmacopœia, or the still more valuable saccharated carbonate, are very beneficial. If the patient be of stout, phlegmatic habit, the tonic may be advantageously combined with a cordial and saline [formula 37]; and in females past the middle period of life, especially where these headaches accompany alterations of the whole system at the great climacterical period, the muriated tincture of iron combined with cinnamon [formula 31] usually proves exceedingly serviceable.*

* CASE II.—A tall, nervous lady, aged 41, single; seen in 1858; had suffered for fourteen years from dull and heavy pain, chiefly at back of head, and expressed a belief that she had not been free from it for more than four consecutive days during the whole of that time. Ten days before her visit she was seized with sudden giddiness, and would have fallen but for support, and the sensation continued in a less degree until I saw her. Twice before she had suffered similarly, and two of her family had died from softening of the brain. She was very despondent. Bowels regular, appetite bad, tongue pale and indented, suffered from nervous deafness,

90. There is a form of headache which presents many of the characters of both the plethoric and congestive; and which is almost peculiar to young women with irregularity or deficiency in the healthy powers of the system. Early hours, spare but nutritious diet, exercise in the open air, but not to produce fatigue, and the use of the shower-bath in the morning and a warm foot-bath at night, with an occasional aperient [formulæ 4, 26, or 28], seldom fail to afford relief.*

increasing when the pain was severe. The exciting causes were those ordinarily producing congestive headaches. Ordered formula 31 twice a day, with the addition of fifteen grains of hydrochlorate of ammonia to each dose. The sensation of giddiness was soon relieved, she gradually gained strength, and entirely lost her headaches, under a continuance of the medicine.

* CASE III.—In 1857, I was consulted by a pale, intelligent girl, aged seventeen, with very depressed manner, not nervous or hysterical, but the face flushing when speaking. She had no employment, a comfortable home, no causes for worry or anxiety, and had never suffered from any severe illness. Hands and feet generally cold, but her general health good, tongue clean, and bowels regular. She had suffered from headaches, more or less severe since childhood, most intense during second dentition and at puberty, but becoming more persistent of late years; until she was scarcely ever free from pain, increased by excitement, heated rooms, or vitiated air, not occurring at any particular time, or notably increased by any varieties of food. Headache general, *sometimes worse over brow, sometimes at occiput.* Had been

91. Both in Plethoric and Congestive Headaches, great evil results from a foolish and too frequent practice prevalent among persons suffering from them, who, without consulting a medical man, "get themselves bled." Temporary relief is usually experienced from the removal of the blood, as the local congestion is, *pro tanto*, relieved; and hereby the evil is increased, the fallacious advantage derived leading to a repetition of the bleeding. In plethoric persons, the removal of the blood by this means seems to act as a stimulus to the still more active formation of it, and hence, the interval is not long before the headache recurs with increased severity. In Congestive Headache, as the amount of the vital fluid in the system does not exceed that required by the body, so the removal of a part of it by general bleeding only weakens the patient and exaggerates the deficiency of tone already existing. The most serviceable method of depleting, where the suffering is very variously treated, but without benefit. I regarded this case as one in which there was deficiency of tone in the minute vessels of the circulating system, and prescribed *Liquor Arsenici Chloridi* with *Cardamums* and *Gentian*, and an occasional aperient. In ten days she was greatly benefited, and had become cheerful and hopeful. In a month, as the pain had entirely left her, she ceased her visits, and I had no subsequent opportunity of seeing her.

great and the strength tolerably good, is that of cupping at the back of the neck. The action of the cupping-glasses proves beneficial in addition to the effect produced by the abstraction of blood. In weakly persons, the simple application of the glasses several times repeated, without the removal of any blood, often gives a great relief. In cases where the pain is very severe and the patient of debilitated constitution, the use of the croton-oil liniment applied to the central part of the nape of the neck generally affords relief by the counter-irritation it produces; but the discomfort often caused by it proves a hindrance to its frequent employment.

92. THE CAUSES AND TREATMENT OF DYSPEPTIC HEADACHES. The headaches due to derangement of the digestive organs have many causes common to their several kinds; whether of the variety that ensues immediately after taking food, or that which comes on a few hours after a meal; the Bilious or the Sick Headache.

93. Sedentary habits, especially when combined with anxiety of mind and insufficient exercise, seldom fail to weaken the powers of digestion, and are frequent predisposing causes of headaches. They are, moreover, often combined with irregu-

larity in diet ; too long an interval being allowed to elapse between the meals, or an excessive quantity of food being taken to subdue the sensation of hunger. The golden rule that "you should eat when you are hungry, but not as long as you are hungry," is neglected. The stomach is overloaded, and although (with the aid probably of a spirituous stimulant) it may struggle through its work without producing further inconvenience than a sense of repletion, yet, sooner or later, its powers of endurance will fail ; and frequently the years of suffering from various forms of dyspepsia, with or without sympathetic headache, that follow long abuse of the powers of digestion, more than counterbalance the previous period of immunity and impunity. It is in mid-life, when the powers of the system are strongest, that these predisposing causes are most active, and the length of time during which the stomach may be thus ill-treated depends much upon the constitutional strength of the individual.

94. The hurry and excitement of business, of speculation and of the Stock Exchange ; the brain-wear of literary occupation, &c., especially predispose to the occurrence of headaches arising from dyspepsia, on very slight errors in diet. It need

hardly be mentioned, that previous habits of intemperance are frequent causes. Even those, however, do not more certainly lay the foundation for indigestion and its accompanying headaches than the sudden relinquishment of intemperate habits; the convert rushing into the other extreme, and positively avoiding the diet that his debilitated frame actually requires.

95. In the consideration of the exciting or direct causes, the force and influence of those which predispose to the production of a headache must never be forgotten. An article of food may disagree, may give rise to a headache to-day—when the stomach or brain is unusually excitable—which might have been taken with impunity yesterday, when those organs were less irritable. Mental excitement, it must be remembered, exercises a powerful influence over the first process of digestion, as well as over the appetite for food. It is well known how frequently the sensation of hunger is destroyed by any sudden intelligence or shock; and, under the dread of an impending operation, food has been ejected from the stomach in an unaltered state hours after it has been taken. The propriety of allowing the brain to lie fallow whilst the process of digestion is active, may be judged

from the natural antipathy to any strong mental exertion experienced by every one after a full meal.

96. It is seldom that the headache cannot be traced, by careful consideration, to some previous excess in drinking or smoking, or in the quantity, quality, or variety of solid food, acting as an immediate cause of the pain. Some persons can never take particular articles of diet without suffering from a headache. This peculiarity is often only developed when the powers of the digestion have become impaired. And, hence, its influence may not be observed or appreciated, and the pain fail to be attributed to the true cause.

Lastly, when passing in review all causes that may operate injuriously in cases of long continued dyspepsia, of whatever kind, it is important that the urinary secretion be carefully examined, as this often affords important aid, both in diagnosis and in treatment.*

* CASE IV.—A lady, aged forty-four, applied to me in April, 1857, having for twelve years suffered from severe occasional headaches. Married, no children, but regular, until change of life a few months previous to her visit. Much domestic anxiety occurred about the time of first commencement of the headaches, which have not altered their characters since then, until the change above mentioned, when they became much more intense. Each attack continued three or four days, occurring at intervals which

97. *The Treatment of the Headaches dependent on derangement of the Digestive Organs* requires a careful examination of the peculiarities of each case.

varied from a fortnight to a month. The headache usually commenced in the morning with heavy pain over the forehead, or on the top of the head ; the eyeballs "feeling as if hot skewers were running through them," the sensation of vertex conveying the impression that relief would ensue "if a hole were cut at the top of the head" (I here quote the patient's words, as other persons have frequently used similar terms in describing the pain). Being an actress by profession, the glare of the foot-lights greatly increased the sufferings during an attack, sometimes compelling her to leave the stage. The bowels were regular, the tongue white, the appetite good, but a sensation as of constriction round the body, after taking food, often troubled her ; the pulse feeble, but the heart's action healthy, her sight usually good, but dim during an attack. Dull, aching pains across the loins had frequently troubled her since the first commencement of her headaches, with occasional discharge of quantities of uric acid gravel ; and this substance, with crystals of oxalate of lime, was abundantly found in the urinary secretion. Pills of oxide of silver, with extract of nux vomica, and a mixture containing an excess of potass, was ordered. During May she had only one slight attack, and lost all symptoms of indigestion. Then some great mental distress caused a very severe headache of the old character, but it lasted only a day. In July, the headaches only caused slight inconvenience, and their duration was diminished to a few hours. At this time she had a severe attack of nephralgia in the right kidney, from which she recovered but slowly. Mineral acids, with nitrate and chlorate of potass, and pareira brava were subsequently ordered, and the pills resumed—she generally improved ; in November, had been two months free from headaches,

The removal of the immediate cause of suffering should not be so much an object as the permanent relief of the unhealthy condition of the stomach ; for, without the accomplishment of this by steady perseverance and self-denial, no power can avert the recurrence of the pain on any irregularity of diet.

98. When the headache comes on very shortly after a meal, especially where it can be directly traced to one or more indigestible articles of food, and where the patient is tolerably strong, an emetic [formula 11], followed by draughts of warm chamomile tea to facilitate its operation, will usually remove the offending food and the pain together ; any continuance of the headache being relieved by an hour's quiet and the application to the forehead of a thin cloth damped with Eau-de-Cologne, with essence of verbena, or with simple spirit and water. Where the pain ensues some hours after taking food, a warm draught, with rhubarb and magnesia [formula 14], is generally beneficial. Although stimulants (as a glass of Cognac, &c.) often afford temporary relief, and are therefore too frequently

and the secretions were of a healthy character. By degrees she discontinued medicines, and subsequently reported that the relief was permanent.

indulged in, their use eventually proves injurious, especially where the headache is of habitual occurrence; the momentary immunity being assuredly followed by an increase in the frequency and intensity of future attacks. The headache that comes on some hours after a meal may often be warded off by taking a few grains of rhubarb and aloes [formula 21] as a dinner pill. But it must be remembered that as long as this is necessary, there is an unhealthy state of the stomach, to which the dose only serves as a temporary palliative, and which requires other and further treatment to do away with the need of coaxing it to good behaviour by a dinner pill.

99. The first and most essential requisite towards the permanent relief of the headaches that accompany impaired digestive powers resulting from sedentary habits, is a determination on the part of the patient to strictly regulate the diet; to carefully attend to the action of the bowels; and to shift the burden of the work, giving more rest to the mind and more exercise to the body. The effects of various articles of food should be noticed, and whatever manifestly disagrees should be forthwith shunned. More than six hours (*exclusive of sleep*) should never elapse without taking

food. The luncheon should purposely and literally be allowed to spoil the dinner. Persons of sedentary lives, leaving the desk for the dinner-table with only an interval of a few minutes between them, should endeavour to obviate the tendency to indigestion thus produced, by making as simple as possible the work that the stomach is called on to perform; not partaking of more than one dish, and avoiding taking too much at one meal. The best diet is the plainest, and those subject to dyspepsia should shun rich soups and broths, and avoid over-diluting the contents of the stomach by fluids* of any description. The quantity of food taken at a meal should be especially restricted; for persons of delicate digestions will often complain of the ill effects of some particular article of diet, when their sufferings are in reality due to the quantity of all, rather than to the disagreement of any one part. "The how much," it has been well observed, "must be determined by every individual; and those who are happy enough to abstain at the

* John Hunter says: "A fluid is difficult of digestion. We may observe, that nature has given us very few fluids as articles of food, and to render that few fitter for the action of the digestive powers a coagulating principle is provided to give them some degree of solidity."—*Observations on certain parts of the Animal Economy.*

first sensation of satiety have made great progress in the art of maintaining a command of appetite; one of the greatest aids in recovering, as it is one of the greatest preservatives of health." And in persons subject to dyspepsia even this is not always a sufficient restraint; for sometimes, when the stomach itself has become unhealthy in its action and its influence, there is a constant craving for food, a sort of false appetite, that must be combated and conquered. Where, on the other hand, the appetite is simply deficient, a little ice, or a draught of ice-cold water, taken half an hour before dinner, usually proves very serviceable; its efficacy depending simply on the reaction that follows the first effect of the cold on the stomach. In this way the keen appetite, often excited by taking a few raw oysters, is probably produced. The strict observance of a very meagre diet is seldom advisable, though great discrimination is required in the food that is chosen.* Suppers should be

* The following plan of daily diet, if rigidly continued, very seldom fails to prove beneficial where the precautions in reference to medicines and exercise are at the same time observed. For breakfast, a cup of tea (*not too hot*), with a biscuit or dry toast, a fresh egg lightly boiled, or a small portion of cold fowl or game. For dinner, a tender beef-steak, dressed on a gridiron, care being *taken that each* mouthful be properly masticated; no vegetables,

avoided,* or a little sago or Carrageen-moss jelly, with dry toast only, may be taken if the craving for food be very great. Spirits should be shunned at night. The use of a flesh-brush, or a coarse hair-glove, over the surface of the body, especially in the region of the stomach, is often very beneficial. Exercise, either walking or on horseback, should never be omitted a single day; before dinner being the best time to choose for it. The regular action of the bowels should be carefully attended to, and where the diet and exercise prove insufficient, an occasional aperient should be taken.

100. Now the composition of this aperient is of great importance, not only to persons of dyspeptic habits, but to all who value their health. Various constitutions require different combinations of the numerous kinds of aperient medicines included in

or only a well-cooked potato; a light pudding, with brown bread, and a glass of bitter ale. Mutton or poultry, with a little fish (plainly boiled), may be substituted on alternate days. A cup of tea and a slice of dry toast may be taken in the evening.

* "But would you sweetly waste the blank of night
In deep oblivion; or, on Fancy's wings
Visit the paradise of happy dreams,
And waken cheerful as the lively morn;
Oppress not Nature sinking down to rest
With feasts too late, too solid, or too full."

Armstrong.

our Pharmacopœia. It is as impossible to combine them in a form suitable to every constitution, as it would be to fit the feet of a whole generation from one last. Where the necessity exists for an occasional aperient, it is far better for a person to seek from his family medical attendant a prescription suitable to his constitution, than to take any of the cheap and pernicious drugs that usually compose the quack aperient pills.*

* CASE V.—A lady, aged thirty-five, composed in manner, tall, cheerful, and of sallow complexion. First seen in 1856. Had then suffered for twenty years from occasional but severe attacks of headache, being healthy and regular in other respects. Married six years, no family. Suffered rather more intensely from headaches since marriage. As her position afforded every opportunity for trying all means to obtain relief, she had been under various treatment, visited the German spas, and travelled in the East, but although temporarily benefited, she never obtained any permanent relief. The headache came on, without discoverable causes, at irregular periods, the longest interval being a fortnight; but indigestible food, hot rooms, and the reaction from excitement, certainly produced an attack. The pain dull and heavy, and chiefly frontal; but, when awaking with it in the morning, there was always an accompanying sense of weight at the occiput. Three members of her family were similarly affected. The pulse was quiet; eyes clear, pupils acting well; tongue creamy, broad, and with indented edges; appetite feeble; bowels irregular, requiring occasional aperients (these had been too frequently taken, and of an unsuitable description). Exercise, both walking and riding, was abundantly taken. Ordered a manganese powder with quinine (see

101. In cases of headache depending on dyspepsia, the combination of blue pill and rhubarb [formula 16], or colocynth and ipecacuanha [formula 17 or 35], usually prove beneficial in their effect and gentle in their action. When the system is debilitated, it is often more advisable to employ a warm aperient draught [formula 48] in the morning in place of the night pills; a slice of bread or a biscuit being previously taken. Great benefit is generally derived from the combination of a bitter with an alkali [formula 50], taken twice a day. If the stomach be very irritable with excessive flatulence, a mixture in which the nitrate of bismuth is suspended by means of tragacanth mucilage [formula 29] is more suitable. The same medicine, combined with soda and capsicum [formula 34], proves also serviceable in cases where there is much acidity, with loss of

Case I) every morning. Hydrocyanic acid and phosphate of soda, twice a day; the diet was carefully regulated. She rapidly improved, and a regular action of the bowels was established; then the oxide of silver, with extract of nux vomica, was prescribed, and when the dyspeptic symptoms were entirely relieved, and the tongue became more healthy, a mixture containing hydrochlorate of ammonia with wine of aloes was ordered. From first to last, the headaches gradually diminished in severity and frequency, and in three months she reported herself cured. This assurance has been confirmed by a recent communication (October, 1859).

appetite and general want of tone. Where the tongue is pale at the tip and edges, and the system weakly, there are few drugs prove so unvaryingly successful as the oxide of silver, especially when combined with a bitter [formula 12]. In severe cases of long continued dyspepsia with habitual constipation, the Ignatia amara is also an invaluable medicine [formula 5].*

102. The headache that ensues after a debauch is greatly relieved by a full dose of the acetate of ammonia, combined with an aromatic and tonic

* CASE VI.—A tall, sallow woman, aged forty, a widow, with the sole charge of a large business, came to me in 1857, complaining of severe headaches, occurring every ten or twelve days, and each attack continuing for two days or longer. Until the age of thirty she only suffered at certain periods; since that time, they have occurred without any cause except the constant anxiety, the pain being principally on the right side of head, and so intense in the right eye that she had thought that organ diseased, and consulted an oculist about it. Each attack commenced with nausea, and dull, heavy pain at the back of head, to which stimulants afforded temporary relief. Tongue white, pulse feeble, appetite variable, bowels costive, relieved only by aperients. Ordered extract of Ignatia amara, gr. j., with Pilul. Rhei co., gr. iij, twice a day. She passed the next period without suffering (the first time for twenty years). She steadily improved, taking only a slight bitter in addition to the pills, gradually omitted all medicine, and has now *been entirely well* for a year and a half.

[formula 1]. The severity of the headache in these cases is a criterion and a salutary warning of the susceptibility of the stomach.*

103. *The causes that predispose to the occurrence of the SICK HEADACHE* nearly resemble those which induce a tendency to other varieties of Dyspeptic Headache. It less frequently occurs from previous intemperate habits, and more often results from a continued neglect of the due action of the bowels and want of fitting exercise. The exciting causes which produce it may be very slight. The most frequent are sudden changes in the weather, constipation, the reaction from any excitement, irregularity of the diet, and insufficient sleep.

104. Most persons have, now-a-days, a general and correct idea of the manner in which the food that we swallow is disposed of; how a certain acid fluid is mixed with it whilst it is moved about in the stomach, and how this fluid has a wonderful power of dissolving the swallowed food, which then passes on, is subjected to the action of the

* "Were the pleasures of drinking accompanied the very moment with that sick stomach and aching head, which in some men are sure to follow, I think nobody would ever let wine touch his lips."
—Locke.

bile, and finally has its component parts sorted, arranged, and developed into the structures of the body by an apparatus of marvellous simplicity and perfection. It must, however, be borne in mind that if any part of this complicated series of actions be overtasked or badly used, the whole range is more or less disturbed. It is thus that a Sick Headache is produced ; being simply due to the intense sympathy between the brain and the organs of digestion, on which the brain and all the rest of the body depend for their maintenance.

105. *The treatment of Sick Headache.*—During the severity of an attack the intense nausea is first to be combated. If any food has been taken and the sensation of nausea be urgent, though vomiting has not supervened, a draught of warm chamomile tea, or a little weak brandy-and-water, seldom fails to relieve the stomach from its load. If the sickness continue, soda-water, with the addition of a little ginger, usually checks it ; or if very distressing, it may be necessary to apply a mustard poultice over the region of the stomach. The valuable calmative powers of sedatives and narcotics (as hydrocyanic acid, opium, conium, &c.,) demand the judgment of the medical attendant to decide

on their necessity and mode of employment. Perfect rest is absolutely necessary. As soon as it can be borne, an active dose of aperient medicine should be taken ; after which the headache usually begins to abate in two or three hours, and ceases altogether in six or eight. The purgative, which should be an antacid and stomachic [formula 9], does good long before the body is relieved from the offending matters. If the headache continue after the sickness is relieved, calumba combined with an aromatic [formula 22] is very useful ; it especially clears off the sense of heaviness that remains after the urgency of the attack has passed away.

106. The restrictions of diet which have been already advised, apply with equal force in cases of Sick Headache. The attack is only in a minor degree due to any sudden or accidental causes. It generally results from an influence that has been long undermining the system and disposing it to succumb to very slight causes of irritation. Hence whatever plan of treatment be pursued, steady perseverance therein is absolutely required, and regularity in taking the medicines advised, or there is little chance of their being efficacious in restoring to health. In these cases it is especially

desirable that medicines should be made palatable; for whatever is repugnant to the taste is pretty certain to be rejected by the stomach.* It must be remembered also, that unless the whole plan of the diet be duly regulated the benefits arising from medicine are hourly annihilated by neglect and indulgence.

107. Care in these matters, and a steady perseverance in the use of a combination of tonics with alkalies [formulae 18, or 50], with aromatics [formula 22] if there be much debility, or with the mineral acids [formula 23 or 46] if there be great want of tone in the system, seldom fails to produce the happiest results. Pills containing aloes [formula 28] are most suitable as ordinary aperients for persons subject to Sick Headaches, if there be no special contra-indication to their employment. Change of air and scene are always attended with advantage. The use, in moderation, of the chalybeate mineral waters, as found at Tunbridge Wells and in many other parts of England, usually proves of great service.†

* "I hold it for one of the best rules in Physic" (says an old author) "always to content the patient when it can be done without doing him any prejudice."

† CASE VII.—A gentleman, aged thirty, single, consulted me

108. *The predisposing causes of Bilious Headaches* are frequently more or less associated with some natural proclivity to affections of the liver. This organ forms one thirty-sixth part of the whole body; its average weight being about three pounds and a half, its average bulk about eighty-eight cubic inches. This mass is entirely composed of delicately organized secreting glands, none of them larger than a pin's head. The ex-

in 1856, for severe sick headaches, to which he had been subject since he was a boy. No head affection when a child, and general health always good. Headaches occurred every two or three weeks, giving previous warning of approach by listlessness, white tongue, dizziness, and great depression, the actual attack lasting about two days, during greater part of which time he was unequal to any mental effort; the symptoms being those described in the text. On close questioning it appeared that, from the cessation of each headache there was a gradual accumulation of symptoms of atonic dyspepsia, until they culminated in another attack—when, after starving and vomiting, a relief was again experienced. No medicines afforded even temporary benefit, except powerful aperients and narcotics, both of which were objectionable. The diet had been most injudicious. By regulating this, giving pills of oxide of silver, and nux vomica, and subsequently strychnia in small doses with aloes, with formula 46, twice a day, he was greatly benefited. Gymnastic exercises and the use of the shower-bath were enjoined, and in six months he was entirely relieved from his headaches—a gradual amelioration of their severity occurring throughout the whole time of treatment.

quisite structure and design of these minute glands, and the simplicity of their action, cannot fail to impress the most casual student with admiration. To the anatomist, whose researches are more extensive, who sees an equal perfection of construction in every part of the body, the sole wonder is that all should work so well, "that the harp with a thousand strings should stay in tune so long," that, in fact, we should suffer so little from disease, or indeed should ever know a moment's health.

109. In some persons the tendency to affections of the liver seems to be constitutional and even hereditary. The slightest irregularity in diet, or any of the causes already mentioned as producing dyspeptic headache, will induce in them a bilious attack, with an accompanying pain in the head. In those who are not thus constitutionally susceptible, long residence in a hot climate is a frequent predisposing cause; especially if the unwise plan of indulging in diet only suitable to a colder country be followed, whilst the protests of the languid appetite are disregarded, and its energies unnaturally stimulated by hot curries, chillies, and other stimulants.

110. It is in persons who have been thus care-

less of their constitutions, or whose natural tendency to bilious derangement has been still further aggravated by residence in a hot climate, that the more persistent variety of Bilious Headache, already described, occurs; where the dingy yellowish hue of every part of the body sufficiently evidences the unnatural presence of bile, present because the sluggish, inactive, or diseased liver is unable to accomplish the work of separating it from the blood.

111. The causes that give rise to an overflow of bile are in a great measure dependent for their operation on the close relation existing between the action of the stomach and that of the liver. This is well seen in all cases of continued vomiting, as in sea-sickness. Over-indulgence in the pleasures of the table, partaking of fat meats or rich pastry in excess, vehement fits of passion, and sudden changes from a low to a high temperature, may be enumerated as a few of the more frequent causes of this variety of Bilious Headache. The avoidance, as far as possible, of these causes will, in a corresponding degree, diminish the frequency of the seizures.

112. During the severity of the attack (especially in persons not subject to their frequent

occurrence), if the suffering be very great, and the sensation of nausea very urgent, an emetic [formula 11] may be taken with advantage; warm demulcent drinks, as barley water or linseed tea, being swallowed until it has fully and freely acted. In milder cases an antacid, with a little stimulant, will usually relieve the pain; the most useful being a wine-glassful of Dinneford's solution of magnesia with a little essence of ginger; or, failing that, a dose of carbonate of soda with a teaspoonful of brandy, in water; or the draught [formula 14]. Constipation should be carefully avoided in persons who are subject to bilious attacks. When an aperient is necessary, a blue pill and a saline draught may be occasionally taken, or the formula 7, 10, or 16, followed by a seidlitz powder in the morning. Exercise is a most essential adjunct to the treatment, especially brisk walking, riding, rowing, and gardening.*

* CASE VIII.—Seen, in 1858, a delicate woman, aged thirty, married, subject to frequent attacks of intense headache for fifteen years, increasing in severity each year, until the presence of pain “had become the rule of her life.” Had well-marked symptoms of congestion of the liver. The recurring attacks in past years (true sick headaches) had gradually deranged the whole digestive system; hence, constant nausea, want of appetite, extreme despondency, constipated bowels, disturbed rest, enfeebled circulation,

When mercury, in any form, is inadmissible, and especially in those frequent cases where this drug has been too freely employed, I know no aperient so valuable as the sulphate of manganese combined, as in formula 32. It is gentle in its operation, and the resulting motions are deeply tinged with bile.

113. Where the headache depends upon a retardation of bile in the system, a dose of blue pill, or the combination of this medicine with other drugs to facilitate its operation [formula 7, 16, or 17], followed, after a few hours, by an aperient draught [formula 9, 15, or 32], will afford relief by its action. This may be repeated on alternate days for three or four times with manifest advantage. The diet should consist chiefly of vegetable food, and over-cooked meat should be especially avoided. The light French and German wines are often very serviceable to and nauseous taste in the mouth on waking, in addition to the dull, oppressive headaches. *Treatment*.—Formula 35 every morning; oxide of silver with extract of nux vomica twice a day. She steadily improved, and taraxacum with a bitter was subsequently administered. The diet was strictly regulated, and after a few months she described the precautions as having become part of her life. She then called to report herself entirely free from pain, and in comparatively good health; though any departure from the injunctions as to diet gave her immediate warning how much the immunity depended on herself.

persons of debilitated and relaxed habits, but stronger stimulants always prove injurious. The clothing should be warm, and every care be taken to ensure the free action of the skin. Gentle exercise, not continued long enough to produce fatigue, is advisable. Medicines that contain a combination of tonics with alkalies [formula 24, 18, or 27], when steadily continued, usually prove beneficial where no actual disease of the liver itself is present. A simple remedy, and one frequently found to be singularly serviceable, is a fresh dandelion root, chewed during a before-breakfast walk. Change of scene, society, and occupation, and the moderate use of the saline mineral waters, as those of Leamington, Cheltenham, Marienbad, &c., are to be recommended.

114. Persons who have been long resident in hot countries often suffer from severe headaches on returning to cold climates. They have, perhaps, none of the symptoms of bilious derangement, and are unable to suggest any reason for the singular regularity which frequently characterises the attack. Careful inquiry will usually detect the cause. The habits and diet fitted to a warm climate are often found to be persevered in from *custom*, when their continuance becomes unsuitable

and even hurtful. A morning headache may thus be frequently remedied by making the breakfast more substantial; taking a slice of meat or an egg in addition to the customary tea and dried toast. This, or some alteration equally simple in the habits or mode of life, often at once effects a cure. It need hardly be added that the influence of medicine in these cases is, nine times out of ten, positively injurious.

115. NERVOUS HEADACHE. There is a very broad distinction between the different causes that give rise to the several varieties of headache included under the title of Nervous. The headache which occurs in hysterical girls differs very widely from the true "Brow-ague." Yet both kinds often baffle all attempts to trace their origin beyond the nervous system. We know that there necessarily has been, or is, some other tissue or organ primarily affected; for the nervous system receives no direct impressions from without. It has always some special apparatus to serve as a medium of communication with the external world. The eye and the ear, wonderful as is their mechanism, bear only the same relation to the optic and auditory nerves that the telegraph clerk bears to the electric wire. And the more

clearly this first cause, on which a nervous affection depends, is made out, the greater will be the probability of affording relief.

116. The causes which predispose to headaches of a nervous and hysterical character may often be traced through many previous years of the sufferer's life. They are generally influenced, in some measure, by a constitutional tendency in the patient, who is of a nervous temperament; susceptible to slight impressions; easily worried at trifles, with an excitable disposition that no education or training ever thoroughly subdues, and which endures until dulled by age. Nor is the influence of advancing life uniform in all. The liability to nervous affections endures longest in those "who have preserved in age the attributes of an earlier period of life. Such—among women, are those who still retain their susceptibility to impressions; among men are artists, literary men, and those 'vieux garçons' who have misused their lives, and concentrate on themselves all that remains to them of feeling."*

117. Nervous headaches are more frequent in women. There is good cause to believe that their nervous susceptibility is, on the average, higher

* Sandras, 'Traité des Maladies Nerveuses.'

than in the male sex, and good anatomical reason to account for this. Yet the greater frequency of nervous affections in towns than in rural districts, and in females of the upper and middle classes, cannot be so explained.

118. The particular prevalence of nervous diseases among the inhabitants of large cities is well authenticated; and can only be attributed to the difference in habits and in the air they breathe, between those that dwell in towns and those who live in the country. This influence is directly personal, and not hereditary; for there are exceedingly few, even in London, who can trace all their ancestors, for three generations, to have been natives of that city.

119. In females of the upper and middle classes much of the predisposition to Nervous Headaches and allied affections, may be doubtless attributed to the mode of education and of life to which they are subjected. The body is too frequently cramped in defiance of its natural tendencies—to produce that artificial shape known as a “good figure.” The mind is trained, in despite of its natural bias, to acquire a knowledge of what are considered accomplishments, whether there be any natural aptitude or not for such studies. The feelings are

more excited than the understanding. Exercise of the body, as well as of the mind, is restricted. The bright sunshine and the bracing breeze are shunned, for they produce freckles, and roughen the cheek—signs, it is true, of the Beauty of Health, but that, unfortunately, is not our standard of beauty.

120. Men of nervous temperament are excited by causes of anxiety that scarcely affect the equilibrium of the mind of the more robust. They usually learn to command the speech and countenance, seldom manifesting that hurry, confusion, and trembling of the voice in speaking, which, in nervous women, is produced by very slight impressions. On the other hand, in men who are nervous, there may usually be observed a fidgeting and trepidation of the feet and hands when at all excited. The little troubles and many minor cares that beset the lives of all, induce, in them, undue excitement and worry, and predispose to the occurrence of headaches of a simply nervous character.

121. The direct causes that produce these headaches are exceedingly numerous. They need only be very trifling when the predisposition is strong; a loud noise, a vivid light, or a disagreeable smell,

will suffice. Impurity of the air breathed, whether resulting from freshly-painted rooms, from open drains, from the presence of flowers in the sleeping apartment, or the collection of a large number of persons in a close room or an ill-ventilated theatre, especially where gas is burning, are common causes of Nervous Headaches.*

122. But the headaches that arise from these causes are seldom so directly due to the influence of the impure air on the texture of the lungs as the headaches arising from indigestion are dependent on irritation of the stomach or bowels, produced by unfitting food. It is only when the actual constitution of the inhaled air remains unaltered, that this direct sympathetic influence suffices to give rise to the headache. In most cases the head is indirectly affected through the medium of the circulation. The alterations produced in the blood during its passage through the

* It has been calculated that the lungs, after a full inspiration, contain 220 cubic inches of air; thus making the inner surface of the lungs equal to 440 square feet. This is nearly thirty times greater than the surface of the body. The lungs, on the lowest average, make from 21,000 to 25,000 respirations in the twenty-four hours. Hence, it will be easily understood, that an atmosphere even very slightly contaminated must in time produce an injurious effect.

lungs are owing to its being brought in relation with the air. But these changes are not fully effected if the inspired air be deficient in oxygen, the element most essential for their production; or if it contain other constituents, as carbonic acid, sulphuretted hydrogen, &c., whose influence on the blood is directly injurious. Such a deterioration cannot long continue without a corresponding effect on the nervous system; most frequently manifested by the occurrence of a Nervous Headache. It is to these cases especially that Romberg alludes when he says that "Pain is the prayer of the nerve for healthy blood." Close weather is a very frequent cause of these headaches. Some persons are never free from them whilst there is thunder about. In them all, though the nervous temperament usually forms the predisposing cause, the headache is often of the Congestive variety. It need hardly be mentioned, that the influence of mental suffering, in the production of every variety of nervous affection, is very great. Grief for the loss of a beloved object; disappointed hope; mental strain beyond the powers of the intellect; all these give rise to headaches of the most varied characters; the true cause being often a secret locked in the sufferer's breast.

123. *Hysterical Headaches*, accompanied by the peculiar sensations already mentioned, are generally produced, in persons of hysterical habit, by some unfitting excitement, or injudicious exposure. The attack may often be traced to over-exertion, as in dancing, followed by exposure to cold, and frequently ensues after an hysterical fit.

124. *Those pitiable headaches, the predisposition to which is produced by any long-continued drain on the system*, are frequently brought on by the influence of any of the exciting causes that give rise to other nervous headaches. In these cases it is not that the nervous system is unduly excited or irritated, but that the rest of the body no longer retains a proportionate force or development; and therefore, with returning strength, as the balance between the nervous system and the other structures of the body becomes re-established, the excessive excitability proportionally diminishes, and the Nervous Headache ceases.

125. *The Periodic Headache, known by the common name of Megrims*, seems to hold a position between the Nervous Headache and the Brow-ague. On carefully tracing back the pain to its commencement, there can frequently be detected some trivial and half-forgotten cause which sufficed to

produce the first attack. The same influence being repeated, probably established the periodic character of the first few seizures. Among such causes have been recorded, watching for several successive nights ; periodic anxiety of mind ; exposure for a certain time to a current of cold air, as in an office or whilst riding in an open carriage ; sitting always on one side of the fire, persons of sedentary habits thus rendering one side of the face more tender and susceptible to cold. The subsequent regularity of the attacks and their continuance after the cessation of the influence that originally gave rise to them, is a striking illustration of that periodicity in disease which has, of late years, attracted much attention.

126. There is one symptom that is common to many varieties of headaches, nervous and otherwise, and equally a source of suffering in all ; a sense of weight, of pressure on the eyeball, much as if it were too large for its containing cavity. The explanation of these symptoms seems to be as follows. To the front of the eyeball, beyond the limits of the coloured circle or iris, are affixed four muscles ; one above, one below, and one on either side, serving to move the eye directly upwards and downwards, inwards or outwards, and, by their

combined action, to retain it firmly in its cavity or orbit, like the cup in a ball-and-socket joint. This pressure is borne by a cushion of fat placed at the back of the orbit, which, whilst supporting the eye-ball, in part surrounds and, as it were, contains the sensory nerves of the eye. In health this pressure is not appreciated, but is painfully perceptible in that exalted state of nervous susceptibility which so frequently accompanies a headache. The relief afforded to this symptom, when the patient lies with the face turned downwards, is due to the weight of the eye-ball counteracting, in a measure, the tractive force of the muscles. That remarkable prominence which the eye assumes, after division of one or more of its muscles, in the operation for squinting, seems also due to the partial removal of pressure which immediately follows the operation.

127. *The true Brow-Ague, or Hemicrania*, though usually dependent on exposure to the causes which induce intermittent fever, is sometimes the evidence of a far less tractable affection; pressure on, or irritation or actual disease of, one or more of the nerves of sensation on one side of the head. A decayed upper tooth, though not itself sufficiently tender to excite any suspicion, may in this

way prove cause sufficient to account for the suffering ; its extraction affording immediate relief. The Periodic Headache, so frequent in marshy districts, may supervene on any ordinary cold or rheumatic affection arising from a cause that in other instances produces intermittent fever. In other cases it may succeed, or even alternate with, attacks of ague. In many districts, moreover, it has been noticed that ordinary nervous headaches, and hysterical complications connected with them, often cease on an attack of ague, and give place to true Hemicrania. The influence of the cause that produces an intermittent fever has been observed also to endure long after the disappearance of all signs of the disease itself. Thus the course of an ordinary headache, a common catarrh, or other complaint, has its progress divided into distinct stages corresponding and often bearing a striking resemblance to those of an attack experienced years before.

128. In the treatment of *Nervous Headaches* the first indication is to subdue the intensity of the pain, although the accomplishment of this is, in reality, but a minor object in the treatment. There is little chance of affording permanent relief unless the attention be unswervingly directed beyond the

pain itself to the cause from which it arises. If this be recognised, the reason why medicines often fail to afford relief will be at once understood. For where the cause is mechanical or organic in its nature (as a decayed tooth producing irritation,* or the pressure of a tumour, &c., in the course of a nerve), it will be readily perceived that the means of relief lie in the hands of the surgeon or the dentist, and that little help can be expected from medicine.

129. The pain which is the immediate cause of suffering in Nervous Headaches, depending on functional derangement, may, in most cases, be temporarily relieved by the employment of anodynes combined with stimulants. The amount of the latter must be proportioned to the degree of nervous debility; for in all cases of that morbid excitement which characterises and accompanies extreme exhaustion and debility, there is a great diminution of susceptibility to the influence of medicines which simply lull to sleep, if they are given alone. The energy of the nervous system is below par. Obviate this by the combination of

* A case is related by Mons. Descot, where a severe neuralgic affection of the face and head of ten years' standing, was cured by the extraction of a carious tooth.

a stimulant with the anodyne, and, as the nervous energy is aroused and approaches nearer to the standard of health, so will the influence of the sedative develop itself, and calm ease or tranquil sleep result. The exhaustion of reaction which produces the delirium tremens of the drunkard, and the intense nervous debility that ensues after a lingering and wearing illness, are thus, notwithstanding their great apparent differences, amenable to one and the same principle of treatment.

130. There are some medicines that combine in themselves both stimulant and anodyne properties. They are called narcotics ; their primary influence being stimulant, their subsequent effect sedative. First among these is opium, a medicine that has saved more lives by its use, and destroyed more lives by its abuse, than any other drug. But although its influence is very great, it is far inferior to that of aconite and its preparations in relieving nervous pains ; the most intense cases of tic-douloureux, the most agonizing local sensations, often yielding to the influence of the latter drug as if by magic. Like all the more powerful sedatives, these medicines should only be employed under the direct guidance of a medical man ; indeed I believe that many of the worst cases of Nervous Headache

owe their intractibility to the unadvised, pernicious, and often concealed use of opium, its compounds or its alkaloid.

131. The combinations of hyoscyamus with camphor [formula 39], with chloroform [formula 43], or with a diffusible stimulant [formula 8], generally afford great relief to the intensity of the pain in common Nervous Headache, and in cases of Megrims. Hysterical women are usually too well aware of the relief afforded to their sensations by the use of aromatic stimulants, and often indulge in them to an injurious extent. If there be much flatulence in these cases, the combination of a little aromatic confection with an antispasmodic [formulæ 2, 38] proves of advantage, and is often temporarily beneficial also in cases of headache from sheer debility.

132. In the general treatment there are three special points to which attention should be directed: diet, exercise, and medicine. Diet is of most importance in the simple Nervous Headache; exercise in Hysterical cases; medicine in the headaches directly dependent on extreme exhaustion.

133. There are few cases in which the digestion is not in some degree disturbed; and the pain in the head is frequently in part due to this cause.

The particulars of treatment already described when considering Dyspeptic Headaches, should therefore be first attended to, for the chance of medicine doing all the good of which it is capable is directly in proportion to the condition of health of the stomach at the time it is taken. When the tongue continues foul, in despite of every care and attention, and if the patient be tolerably strong, an emetic [formula 11], taken about four hours after dinner, will often prove serviceable in changing for the better the unhealthy condition of the stomach. I believe that the great relief frequently afforded by foreign travel is often partly due to the preliminary sea-sickness in crossing the channel.

134. In cases of Nervous and Hysterical Headaches, the diet should be proportioned to the amount of exercise taken. The meals should be regular, everything beyond the plainest dishes being carefully avoided. Simply cooked animal food of a nutritive and easily digested nature should be taken once, and only once, in the day. All rich pastry, fat meats, and condiments, must be avoided. Bitter ale is usually serviceable, and the light French and German wines are useful in relaxed habits. The amount of fluids, however, especially of warm drink, as tea, &c., should be

restricted. Exposure to cold and damp, or the risk of wet feet, should be guarded against, particularly in certain conditions of the system in women. The hours should be regular; and though cheerful society or amusements that divert without exciting the mind are to be commended, yet even these must be pursued with moderation lest "the toiling pleasure sicken into pain." All enervating habits should be broken through. Sea-bathing is very beneficial, or cold sponging of the surface of the body: or the shower-bath when the progress towards recovery is somewhat advanced, for it can seldom be borne before. This free use of cold water is especially advantageous to hysterical females. It acts as a tonic; and, if combined with regular and brisk exercise and careful diet, will often suffice to remove the hysteric tendency without the use of medicine, for which the mineral waters, as those of Tunbridge, Spa, &c., may often be substituted with advantage.

135. In cases of headache clearly traceable to debility or exhaustion, the first indication is, of course, to remove the drain on the system that has so enfeebled the frame. The diet should be in the highest degree nutritious. Wine at first, and subsequently stout, are usually requisite. A

little warm wine, with a slice of dry toast, taken the last thing, will often ensure a night's repose. The temperature of the body should be carefully maintained by judicious clothing. Any undue exertion or excitement must be carefully avoided. Removal into the country, especially to the native air or to a warm spot at the sea-side, is often almost magical in its effects.

136. Persons suffering from Nervous as well as other varieties of headaches often fail to obtain relief on account of their not giving a fair and steady trial to any one plan of treatment. Years have been producing a condition of the system which a few weeks' medicine is vainly expected to relieve, unaided by medicine's best help—the careful obedience of the patient to the rules laid down and the regimen prescribed. If due attention be paid to the diet, habits, and other matters already mentioned, then the employment of tonics, continued for some time—what in fact was formerly called 'a course of strengthening medicine'—seldom fails to eventually afford relief.*

* CASE IX. A lady, aged twenty-seven, came under my care in 1857, single, a vocalist by profession, but of late had been prevented from appearing in public, and even from teaching, by severe headaches. She had been subject to them for ten years, but their

137. In the administration of tonics, as of all other medicines, great care is required. The digestion may be healthy, but in nervous persons it is always delicate. If too powerful a tonic or too large a dose be given, it produces a sensation of tightness across the forehead, a tendency to cos-

intensity had constantly increased, and occasional attacks of vertigo, sometimes causing her to fall, had recently added to her sufferings. She was highly nervous in manner, her pulse feeble and weakly, her tongue trembling and white, the bowels habitually constipated and great constitutional irregularity. The headaches were worst in the morning, and abated towards evening; the pain dull and oppressive, chiefly over the brow, and brought on immediately by any nervous excitement, though she could endure considerable physical fatigue. The first cause could be traced to mental distress. Had been for three years under treatment, with assurance of eventual recovery, but meanwhile the position which her high talents had secured was being lost. Diet regulated, shower-bath ordered, and formula 37, with pills of oxyde of silver and extract of aloes twice a day. She passed over the ensuing period of her greatest suffering without any severe attacks; the bowels became regular and she gradually lost all pain in the head; but the attacks of giddiness continued for some time, until the general health had greatly improved. In three months she resumed all her duties, and sang in public without distress. Mineral tonics, with phosphoric acid and bitters, were continued, and their persistent use for a long period advised. Inattention to this injunction caused a subsequent relapse for a month, but after this warning she became careful, and in a year was perfectly recovered and enabled to fulfil a long and trying engagement without any recurrence of the pain.

tiveness, and a sense of restlessness and irritation of the whole body. The milder bitters, as infusion of orange or gentian, should be first taken, the more powerful tonics being substituted as the system gains strength to bear their action. In cases of nervous and hysterical headaches the mineral acids [formulæ 23, 46], or the phosphoric acid [formula 41], combined with vegetable bitters, are very serviceable, though their employment should never be too long continued without intermission. When there is great debility and sluggishness of the system, quinine usually proves beneficial, especially when combined with aloes [formula 6]; and where the patient is a female, and somewhat passed the period of middle life, a combination of iron with cinnamon [formula 31] is often exceedingly useful.

138. In Hysterical cases the mineral tonics, iron, zinc, &c. [formulæ 31, 32, 33, and 44], sometimes succeed in effecting a cure when all others have failed, although the previous administration of these milder tonics has probably beneficially paved the way for the more powerful drugs. Of iron, the saccharated carbonate, the compound iron mixture, with $\frac{3}{4}$ ss of tincture of Arnica added to each dose, or formulæ 31 and

89—of zinc, the valerianate and the phosphate in large doses, or formula 44, have been found most advantageous. An aloetic aperient should be occasionally taken [formulae 4, 28], especially if the patient be of phlegmatic habit.

139. In the cases of headache from extreme exhaustion, the preparations of iron prove especially valuable, but often produce great distress if not exhibited with proper caution, commencing with some one of those very elegant preparations of the drug now so much employed, the ammonio-citrate, the citrate of iron and quinine, &c. It is advisable in all cases that a gentle aperient be taken before commencing the use of the tonic, and that it be occasionally repeated as the appetite begins to improve, and the influence of the medicine is evidenced by the disappearance of the pallor of the lip and cheek, and by the returning strength.

140. In the headaches that assume a periodic character in their attacks (especially when they occur in females), careful inquiry must be made to detect any periodical influence to which they may be due, and the treatment modified accordingly.*

* CASE X. In 1857, I was consulted by a lady aged thirty-two, married, with three children, rank, wealth, and perfect freedom

Where the cause is simply functional, they usually give way under the continued use of quinine. Its employment should be commenced in small doses, and gradually increased. It is in general owing to the neglect of this precaution that we so frequently hear persons declare their inability to bear quinine. They have begun with too large a dose. A brisk aperient or an emetic if the patient be strong and stout, followed by the readministration of the medicine after a few days in gradually increased quantities, often satisfactorily proves where the error lay. In delicate and weakly persons it is often advisable to com-

from all cares and anxieties. From girlhood she had suffered with severe headaches occurring previous to, and at the end of, certain periods; at the latter time she was often "nearly insane" from the intense pain, felt over the whole head, but most severe at forehead, its duration being usually one day. Excess or carelessness in diet, also, produced it in a milder degree. Habitually costive, appetite good, pulse weak, tongue pale and indented, complexion bilious. Ordered formula 32 every morning, with a grain of quinine; diet carefully regulated. She passed over the next period with less suffering than for years. A mixture with nitro-muriatic acid, nitrate and chlorate of potass and cascarilla, was now ordered twice a day, the morning dose being continued. The bowels became regular, her periodical sufferings gradually diminished, and in three months she wrote from her country seat to report herself cured.

bine with the quinine that most valuable preparation of iron, the saccharated carbonate [formula 49]. Where the intensity of the pain during an attack is so great as to demand a temporary palliative, the combination of camphor with morphia [formula 13] usually affords relief. Ease is often derived from local pressure and attention to posture; the easiest position being usually that in which the head is thrown back on the shoulders and turned towards the affected side, all constrictions being removed from the neck. The occasional use of an aperient is always advantageous where the pain is simply dependent on a functional cause.*

* CASE XI.—A respectable tradesman, aged thirty-eight, apparently in robust health, came to me in 1856, with the following curious history. For six years he had suffered from severe headaches, occurring, every Friday, commencing in the morning, getting better towards evening, and ceasing at night, being quite free from them in the intervals. The pain not acute or local, but dull and over the whole skull—not affecting the face. He had resided in the city for five years, and lived previously in a healthy part of Devonshire. Teeth sound, hearing and sight good, slept well, and, in fact, had no symptoms of ill health, except occasional twinges of rheumatism and a weak digestion, which made him careful in his diet. No cause could be discovered in his occupation or mode of life for the periodicity of the attacks. Ordered quinine in large doses, and an occasional aperient draught, with colchicum. In a month the

141. If the headache more nearly resemble in its causes and symptoms that known by the name of "Megrims," the restrictions already enjoined in reference to diet, habits, and exercise, demand careful attention. The preparations of iron, already mentioned, will then seldom fail to produce the most beneficial results. In all cases of Nervous Headache, and especially where it is periodic, the mouth should be carefully examined, as the presence of decayed teeth often serves to keep up the irritation.*

142. THE RHEUMATIC HEADACHE can generally, with a little care, be traced to its true cause. This

attacks were much mitigated, and had changed to Sundays, with the same regularity of occurrence, though he had made no change in his habits. As this medicine seemed insufficient for the cure, I prescribed Fowler's solution of arsenic, with infusion of menyanthes. The attacks gradually abated, and I received a letter some months after, to say that he was quite freed from them.

* CASE XII.—A married lady, aged thirty, no family, resident in London, never having lived in any ague district. She had suffered, for two months, from severe pain at the sides of the nose, extending thence to the eyes and brow, coming on each evening and leaving her at night. The sight unaffected, the teeth sound, and general health good; not pregnant. Ordered tincture of arnica ʒss, aromatic ammonia ʒss, three times a day, with aperient pills [formula 42] occasionally. In a few days the pain began to abate, and gradually left her, without any other medical treatment.

is usually some imprudent exposure to cold and damp; sitting bare-headed in a current of air, especially when the body is heated; sleeping in a damp bed, &c.; all the causes, in fact, that give rise to general rheumatism are equally prone to produce a local attack. Previous liability to headaches, of whatever kind, seems to specially determine the affection towards the head. An attack of acute rheumatism is often followed by severe occasional headaches, becoming rarer as the patient gathers strength. This is usually a somewhat protracted process, for persons who have suffered from acute rheumatism take a long time to regain a healthy look.

143. The brow, the back of the head, and the temples, are generally most complained of as specially painful; though the sensations of the patient are not to be altogether trusted; for it will be found on examination, that the soreness and tenderness on pressure is not restricted to these particular parts, the continued pain referred to them being due to the position and attachments of the muscles that lie beneath the skin of the forehead, the temples, and the occiput. Their frequent and involuntary contraction necessarily produces some degree of pressure. This transient

motion of the muscles is not appreciated, but the recurring pressure on the tender fibrous tissue (the true seat of the rheumatic affection) produces pain precisely as the finger does when pressed on other parts of the scalp. During sleep, these muscles are at rest, and hence it is that the patient always feels better in the morning.

144. Rheumatic Headaches, when not complicated with neuralgia, succumb speedily to judicious treatment. Attention to diet is requisite, not only as influencing the rheumatic tendency, but also on account of the increased pain occasioned by any derangement of the digestive function. Animal food should be sparingly taken, and all kinds of malt liquor avoided. Vegetables are suitable when well and plainly cooked. All light articles of diet, as arrowroot, isinglass, tapioca, sago, &c., may be recommended, and wine is advantageous if there be much debility. The clothing should be warm, and exposure to damp, or the risk of wet feet, should be carefully guarded against. Removal to a warm climate seldom fails to alleviate chronic rheumatic pains of all kinds. Great advantage is derived in similar cases from the hot alkaline baths of Vichy and Ems.

145. When the local pain is very severe, great relief is experienced from the application of hot fomentations of poppy or chamomile, or the frequent and brisk employment of a stimulating liniment [formula 3]. Mustard-poultices applied to the neck are also exceedingly useful as a means of counter-irritation. An aperient, containing colocynth with colchicum [formula 42] taken at night, is of advantage at the commencement of the treatment, and may be repeated at occasional intervals; the pills being followed, in persons of a costive habit, by a morning draught [formula 9]. The administration of an alkaline medicine containing potash [formula 40], if continued with regularity, will then generally be followed by rapid amelioration of the pain and tenderness. If imprudent exposure to cold has produced an aggravation of the headache, and especially if the patient be subject to catarrh, it is advisable to administer a sudorific at bed-time [formula 19] followed by a posset of white-wine whey, &c., taken about an hour afterwards.

146. Every endeavour should be made to prevent the recurrence of the attack, by exercise, regularity of living, and the use of the shower-

bath, commenced during the summer months, and gradually increased in force.

147. GOUTY HEADACHES. The predisposition to gout is often only to be ascertained by careful inquiry, as there are seldom any symptoms sufficiently marked in the character and progress of each attack to distinguish it from those mixed forms of headache already mentioned. The patient is not nervous, though very observant of the most minute changes in his health. Although often resembling plethoric headaches, those dependent on gouty predisposition are more periodic in their occurrence, and less traceable to causes that influence the circulation. Whilst nearly allied to some forms of dyspeptic headaches, they differ in the marked sense of relief experienced for some days after each attack has passed over ; whereas the dyspeptic derives no such freedom from his discomfort.

148. From what has been mentioned of the varying characters of gouty headaches, it is evident that the treatment must be modified according to the requirements of each case. Colchicum may be employed with greater freedom than in ordinary gout, care being taken that the bowels are freely

open during its administration. An actual attack is best relieved by a brisk aperient [formula 42], followed by an effervescing mixture, containing an excess of potass [formula 33]. In the intervals, all those precautions enjoined in the treatment of dyspeptic headaches should be enforced; for, without careful observance of these restrictions, it is worse than useless to endeavour by medicine to subdue the evils which are as constantly reproduced by daily indiscretions in diet. No permanent benefit can result from the most judicious treatment, unless the patient determine to live abstemiously, to avoid late hours and indolence, and to bear in mind that "It is the constant course of life we lead, what we do or neglect to do, habitually, every day, that, if right, establishes our health; if wrong, makes us invalids for life."*

149. HEADACHES DEPENDANT ON ORGANIC DISEASE. It is seldom possible, in these cases, to fully recognise, during life, the nature and extent of the morbid change that causes the suffering; owing to the inclosure of the brain in its bony skull. Yet this affords less reason for regret, when it is remembered how seldom there is any cause

* 'Dr. Cadogan on Chronic Diseases.'

to believe that assistance could much avail, even if the disease were patent to the view. Comparison of the changes discovered after death, with the symptoms that characterised the disease during life has, however, sufficed to teach the meaning of many obscure points, and to direct the judgment with increased precision. And this knowledge is ever on the advance ; for the pioneers of its path are observation and experience.

150. Organic diseases of the brain include those accompanied by alterations of its substance, as induration and softening, atrophy and hypertrophy ; and those dependent on new formations encroaching on the space appropriated to the brain itself. The latter class comprises tumours of various size and consistence, from the fluid hydatid to the hardness of a stone ; the deposit of tubercle or cancer in the brain ; a clot of blood from effusion ; the formation of abscess ; the abnormal development of bone on the inner surface of the skull or in the membranes of the brain, &c. ; and organic disease may exist, not only in the brain itself, but in the course of the nerve distributed to the painful part.

151. Alteration of the substance of the brain itself seldom occurs without the accompaniment,

in some stage of its progress, of intense pain in the head. Where the membranes that enclose the brain become the seat of tumours or disease, &c., headache is usually one of the earliest (as it is sometimes one of the most deceptive) symptoms. Where pressure is directly exercised on the substance of the organ itself, the headache can only for a time mask the more urgent symptoms that denote the progress of the disease. But during this period, there are often combined with the pain symptoms that bear a striking resemblance to those occurring in the course of other diseases, and which may thus be attributed to a wrong cause. This error is more likely to occur from the gradual mode of ingress of these anomalous symptoms. The most frequent among them are affections of the special senses, as a failing of the sight; convulsions, terminating in palsy, but commencing so gradually, that they have been mistaken in youth for St. Vitus's dance; intermissions of pain so nearly complete, that the headache has been attributed to ague, and treated accordingly; paralysis and total failure of the intellect, commencing with only slight weakness of one side, and a transient loss of recollection.

152. Though the neglect of these symptoms

may be productive of evil by omission, there is a still more important class which lead to evil by commission. Cases whereof the symptoms, though really dependent on Organic Disease of the brain, closely resemble those arising from some disorder of the digestive organs. In many instances, dyspepsia has actually been present for some time ; and the supervention of the fresh symptoms may thus appear to be only an aggravation of the previous attack. It is to the Sick Headache that the resemblance is usually most close. And, to add to the obscurity, it has been observed that the headache is often less intense in these cases than in others where the cerebral disease, although equally slow in its progress, is unaccompanied by any marked derangement of the process of digestion. It is, therefore, of the greatest importance, to recognise at an early stage the influence severally exercised by the disease of the head and the disorder of the stomach in causing the headache, and to adjust the treatment accordingly.

153. In many cases the cerebral disease is undoubtedly due to constitutional or even hereditary causes. In others the symptoms may be traced to some direct or exciting cause. Injuries of the head sometimes lead to Organic Disease long after

the occurrence of the accident. Insidious inflammation of the membranes of the brain may follow a neglected discharge from the ear or nose. A minute investigation into the history of every case must therefore form the preliminary step, and afford the guiding clue to the plan of treatment to be pursued. And a careful examination of the head itself should in no case be omitted. For it is no uncommon occurrence that a sufferer has the recollection of a fall or blow in this way recalled to his memory, which otherwise would have escaped notice.

154. The knowledge of an existing tendency to disease of the brain, whether hereditary, constitutional, or acquired, must necessarily influence the regulation of the diet and habits, and modify the treatment to be pursued in each individual case. But the principle is the same in all; to carefully avoid whatever is likely to cause distress, or give rise to symptoms which experience has shown to be intractable. Thus the pain produced by stimulants, by anxiety or distress of mind, by noise, or by confinement in a close atmosphere, is a warning that these should be avoided. The irritability of the stomach, and the readiness with which intense vomiting is induced, point out the neces-

sity of carefully regulating the diet, excluding whatever is likely to derange the digestion, or produce nausea.

155. The existence of local pressure on the brain, from the presence of tumours, &c., necessitates still more active diligence in the endeavour to early detect the disease. For, although (in the words of Dr. Abercrombie) "there is little to be said in regard to the treatment of this class of diseases, yet we ought not to consider them all as hopeless. Many of them have certainly their origin in inflammatory action, and by the proper treatment we have every reason to suppose that their progress may at least be impeded, and the life of the patient prolonged, as well as rendered more comfortable."

156. The medical treatment, for the most part, consists in the administration of alteratives, mercury, iodine, silver, &c.,—according to the requirement of each case. Cold external applications, counter-irritation, depletion, and change of air, form also important adjuncts to the treatment. In the more advanced stages of disease, powerful anodynes to afford ease, and direct sedatives to check the nausea, are usually necessary. All the mechanical appliances devised for the alleviation

of suffering, water-beds, air-cushions, &c., should be taken advantage of. But there comes a time, at length, when all that medicine can do, and all that art can effect, is to render smooth the downward path to death.

157. HEADACHES IN OLD AGE are also often associated with alterations in structure of the brain and its blood-vessels, that amount to organic disease. These, however, differ from the organic diseases of adult life in being usually dependent on natural changes incidental to old age. As life advances, the blood-vessels of the brain undergo a greater or less alteration and deterioration of their structure, which tends to render them inelastic and brittle, impedes the circulation through them, and hence interferes with the proper nutrition of the organ. The common occurrence of Congestive and Plethoric Headaches in old people on the slightest excitement of the circulation, and the increased frequency of apoplexy as life advances,* are in a great measure due to these changes. The alteration in structure which characterises soften-

* Apoplexy increases progressively in each decade of years from 20 upwards. It is ten times more frequent between the ages of 60 and 70 than it is between 20 and 30; five times more frequent between 70 and 80 than between the ages of 30 and 40.

ing of the brain in old age has also been referred to defects in nutrition and the reparative process. Nor are these changes confined to the organs of circulation. The energy of the nervous system is diminished; and to this cause may be indirectly attributed the chilled extremities and susceptibility to cold observed in waning life. The stomach and bowels are less sensitive, their mucous membrane being thickened throughout the whole length of the alimentary canal; and hence the rarity in old age of these sympathetic headaches that arise from indigestion. The muscular tissue is no longer renovated with the ceaseless activity of adult life, and has even a tendency to degenerate into a lower form of structure; hence the failing strength and inaptitude for exertion. The task which was formerly accomplished with ease, now demands an effort and an undue putting forth of the strength; the corresponding excitement being followed by consequent exhaustion, and a headache which gives warning that too much has been attempted.

158. Old age itself, therefore, with the physical changes that naturally accompany the decline of life, may be considered as predisposing to the occurrence of headaches. But the effect of these

changes on the various parts of the system may not be uniform. The balance of life is not always equally sustained. Thus, the heart, after a life of much muscular exertion, often retains, even in advanced life, much of its vigour ; this preponderance necessarily influencing the circulation of which it is the prime agent, and rendering the inelastic vessels of the brain liable to injury.

159. It necessarily follows that first among the direct causes of Headaches in Old Age, must be reckoned whatever tends to excite the circulation or impede the return of blood from the head. Atmospheric changes, exposure to cold, or to the direct rays of the sun, mental exertion or anxiety, costiveness, and too good living, are also frequent exciting causes.

160. There is no more common mistake made by old people than that of supposing their systems to 'want nourishment;' that high feeding will prolong life. Every-day experience shows the reverse to be the case. There are very few aged persons in prosperous circumstances who would not derive advantage from curtailment of their daily diet ; but all alterations, whether of diet or habits, should be very gradually effected in declining life. Animal food should be only sparingly

taken, and lean, hard, or over-cooked meat, be avoided. Made-dishes—even when rather highly seasoned—can frequently be partaken of with less inconvenience than more simple fare ; but whatever requires much mastication should be especially avoided. Light and farinaceous articles of diet, as freshly-made jellies, arrowroot, sago, gruel, &c. usually prove very suitable ; and milk, in small quantities, is often readily taken when everything else disagrees. Chocolate or cocoa is preferable to tea or coffee for old people, and care should be taken that the body be not chilled during the process of digestion. The clothing should be well aired and warm, even during the summer months, and in winter time the temperature of the bedroom should be maintained throughout the night. There is good reason to believe that many old persons found dead in their beds have perished for want of this precaution, chilled and killed by the ingress of the cold night air.

161. The apophthegm of Cullen, that we should endeavour, in treating disease, to ‘avert the tendency to death,’ is specially applicable in the ailments of advanced life. The diminished power of resistance to disease and to the action of remedies, warns us to be heedful in the employment of me-

dicines—to use all gently. Unfortunately this warning is not always regarded by patients. Persons advanced in life, especially those of the better class and in comfortable circumstances, often acquire a most injurious love for ‘physicking’ themselves. Their thoughts, being less disturbed by worldly affairs, become more isolated and concentrated on their own feelings. They have usually acquired during their lives, some acquaintance with the properties of the contents of the domestic medicine-chest, and this knowledge they indiscriminately bring to bear upon themselves. They are tolerably sure to suffer for their imprudence, and very many might have appropriately inscribed on their tombs the famous epitaph of the hypochondriac: ‘*Stavo bene; mà per star meglio, sto qui.*’ There is, however, one rule that might always be advantageously borne in mind:—No person in the decline of life should ever take mineral medicines, except they are professionally prescribed. I refer to the apparently simple preparations of chalk and magnesia, as well as to the more energetic ones of mercury, antimony, &c.

162. It is important, in advanced life, that the bowels be carefully regulated without irritation. To the want of proper caution in this respect are

due very many of the Congestive Headaches of old people. The aperient employed should be in a fluid form. Pills are with difficulty dissolved by the weakened digestion, and their power is thus developed too gradually to ensure their efficacy. Senna, with an alkali to dissolve the resin, and an aromatic to prevent griping, is an excellent general aperient [formula 26], the dose being proportioned to the patient's age ; the addition of a saline proves advantageous where there is any tendency to plethora or congestive headaches [formula 47]. After the action of even the most gentle aperients, it is often advisable that a little warm wine, coffee, or other stimulant be taken to counteract the depression so readily induced in old age. Frequently, however, a roasted apple, or a few stewed prunes at night, will supersede the necessity for any medicine whatever.

163. In persons who have led a 'hard life,' who are thin, and worn, and weakly, the headaches that so frequently arise on slight changes of weather, or from other trifling causes, are benefited by a slightly stimulant and cordial mixture [formula 45], or by a tonic [formula 25 or 41] ; a glass of wine being taken before retiring to rest, and repeated once or twice during the day.

164. It is very seldom that old people can bear depletion. Where absolutely required, cupping on the back of the neck is the method most frequently and serviceably employed. Repeated application of the cupping-glasses, without removal of blood, proves of very great advantage in the Plethoric and Congestive Headaches of old people, especially if there be any apoplectic tendency.

165. In those perilous cases where actual disorganization of the brain itself, or inflammation of its membranes, is present, it is important that every symptom be watched for, and its progress disputed inch by inch. The nicest attention to every minute phase of the disease is necessitated ; for the fortress of Life can be maintained only by a vigilant guard. Its ramparts are fallen and its walls are broken, and the besieger, Death, will assuredly allow no weak point to escape his attack.



FORMULÆ.

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1.

- R. Liquoris Ammoniae acetatis ℥ss.
 Tincturæ Aurantii
 Syrupi Aurantii āā ℥j.
 Tincturæ Capsici m̄ xx.
 Infusi Aurantii compos. ℥vj.
 Misce : fiat haustus.

To relieve the Headache that ensues after Inebriety.
c. (Paragraph 102).

2.

- R. Confectionis aromaticæ gr. x.
 Tincturæ Lavandulæ compos. ℥ss.
 Infusi Cascarillæ ℥x.
 Syrupi Papaveris ℥j.
 Spiritus Ætheris chlorici ℥ss.
 Misce : fiat haustus.

In Hysterical cases with much flatulence. (Parag.
31.)

3.

- R. Linimenti Saponis ℥iiss.
 Liquoris Ammoniae ℥ss.
 Tincturæ Opii ℥ss.
 Misce : fiat linimentum.

For external application in Rheumatic Headaches.
Parag. 145.)

4.

- R. Decocti Aloes compos. ℥vj.
Spiritus Ammoniac aromatici ℥ss.
Infusi Aurantii compos. ℥ss.
Syrupi ℥iss.
Misce: fiat haustus.

To be taken in the morning. (Parag. 90, 138.)

5.

- R. Extracti Ignatiæ Amaræ gr. vj.
Pulveris Piperis Capsici gr. iv.
Pilulæ Rhæi compos. ℥j.
Misce: in pilulas viij divide: deaurentur.

One to be taken before dinner.

6.

- R. Pulveris Camphoræ
Quinæ Disulphatis āā gr. x.
Extracti Aloes gr. xij.
Extracti Hyoscyami ℥ss.
Mucilaginis Gummi Acaciæ q. s.
Ut fiant pilulæ xvij.

Two pills to be taken twice a day. (Parag. 137.)

7.

- R. Pulveris Ipecacuanhæ gr. iss.
Hydrargyri Chloridi gr. ij.
Pilulæ Colocynthis compos. gr. vj.
Olei Carui m j.
Misce: in pilulas ij divide.

Aperient.—To be taken at bedtime. (Parag. 112
113.)

8.

- R. Tincturæ Hyoscyami
Spiritus Ammoniaë aromatici aa ʒss.
Syrupi Aurantii ʒj.
Aquæ Menthæ piperitæ ʒx.
Misce : fiat haustus.

In Nervous and Hysterical cases. (Parag. 131.)

9.

- R. Magnesia ʒj.
Liquoris Potassæ m̄ xij.
Tincturæ Sennæ compos. ʒj.
Infusi Sennæ compos. ʒvj.
Syrupi Zingiberis ʒj.
Infusi Aurantii compos. ʒss.
Misce : fiat haustus.

Aperient, in cases of Sick and Bilious Headaches, &c.
(Parag. 105, 113, 145).

10.

- R. Hydrargyri Chloridi
Saponis Castilliensis aa gr. iv.
Pulveris Ipecacuanhæ gr. ij.
Misce : fiant pilulæ ij.

To be taken at night. (Parag. 112.)

11.

- R. Pulveris Ipecacuanhæ gr. xxv.
Ammoniaë Carbonatis gr. v.
Aquæ Menthæ viridis ʒiss.
Misce : fiat haustus.

Emetic, followed by draughts of some warm fluid.
(Parag. 98, 112, 133.)

12.

- R. Argenti Oxydi gr. xij.
Pulveris Piperis Capsici gr. iv.
Extracti Gentianæ gr. xxiv.
Misce: fiant pilulæ viij. (Deaurentur.)

In Atonic Dyspepsia.—One pill twice a day. (Parag. 101.)

13.

- R. Morphine Hydrochloratis gr. j.
Pulveris Camphoræ gr. xxiv.
Mucilaginis Gummi Acaciæ, q. s.
Ut fiant pilulæ vj. (Deaurentur.)

In Intermittent Headaches.—One pill to be taken when the Headache is very intense.—Five hours being allowed to elapse before repeating the dose. (Parag. 140.)

14.

- R. Pulveris Rhæi gr. xij.
Magnesiæ Carbonatis gr. x.
Spiritus Ammonię aromatici ℥ss.
Syrupi Zingiberis ℥j.
Aquæ Anethi ℥x.
Misce; fiat haustus.

Or,

- R. Tincturæ Rhæi compos. ℥iss.
Sodæ Carbonatis gr. viij.
Solutionis Magnesiæ (Dinneford) ℥ix.
Syrupi ℥j.
Misce: fiat haustus.

In cases of Headache from deranged Digestion. (Parag. 98, 112.)

15.

- R. Magnesiae Sulphatis ʒiiss.
Acidi Sulphurici diluti m̄ viij.
Olei Limonum m̄ ij.
Pulveris Tragacanthæ compos. gr. x.
Infusi Gentianæ compos. ʒiiss.
Misce: fiat haustus.

An Aperient draught in Bilious cases. (Parag. 113.)

16.

- R. Pilulæ Hydrargyri
Pilulæ Rhæi compos. āā gr. iv.
Extracti Hyoscyami gr. ij.
Misce: fiant pilulæ ij.

To be taken at night. (Parag. 101, 112, 113.)

17.

- R. Pulveris Ipecacuanhæ gr. j.
Pilulæ Colocynthis compos. gr. vij.
Extracti Gentianæ gr. ij.
Olei Carui m̄ ʒ.
Misce: in pilulas ij divide.

Aperient.—To be taken at bedtime. Parag. 101, 113.)

18.

- R. Potassæ bicarbonat.
Sodæ Carbonatis āā gr. x.
Tincturæ Gentianæ comp. ʒj
Infusi Calumbæ ʒvj.
Syrupi Rhæados ʒj.

To be taken twice or three times a day. (Parag. 107, 113.)

19.

- R. Pulveris Ipecacuanhæ compos. gr. xij.
Pulveris Camphoræ
Pulveris Guaiaci āā gr. iv.
Misce : fiat pulvis.

A Sudorific in Rheumatic cases, when the head is cold.
—To be taken at bedtime. (Parag. 145.)

20.

- R. Pulveris Antimonii potassio-tartratis gr. $\frac{1}{6}$.
Pulveris Jacobi veri gr. v.
Pulveris Potassæ Nitratis gr. x.
Misce : fiat pulvis.

Sudorific.—To be taken at night, when the head is hot. (Parag. 82.)

21.

- R. Pulveris Rhæi gr. xvij.
Pulveris Capsici gr. v.
Sodæ Carbonatis exsiccāt.
Pulveris Aloes
Saponis Castilliensis āā gr. xij.
Misce : in pilulas xij divide.

Dinner pills.—One to be taken an hour before the meal. (Parag. 98.)

22.

- R. Spiritūs Ammoniae aromatici m̄ xl.
Tincturæ Calumbæ ʒj.
Infusi Calumbæ ʒx.
Syrupi Papaveris ʒj.
Misce : fiat haustus.

To be taken three times a day. (Parag. 105, 107.)

23.

- R. Acidi Sulphurici diluti $\overline{\text{m}}$ xij.
Acidi Hydrochlorici $\overline{\text{m}}$ v.
Tincturæ Aurantii \mathfrak{z} j.
Infusi Gentianæ compos. \mathfrak{z} vj.
Syrupi Rhæados \mathfrak{z} j.
Misce: fiat haustus.

To be taken twice or thrice a day, an hour before meals. (Parag. 107, 137.)

24.

- R. Extracti Taraxici \mathfrak{z} j.
Ammonię Hydrochloratis gr. xij.
Spiritus Ætheris Chlorici $\overline{\text{m}}$ xv.
Infusi Aurantii compos \mathfrak{z} j.
Misce: fiat haustus.

To be taken twice a day—two hours after food.

25.

- R. Guaiaci contriti gr. vj.
Aloes gr. iss.
Quinæ Disulphatis gr. j.
Olei Menthæ piperitæ $\overline{\text{m}}$ $\frac{1}{2}$.
Mucilaginis Gummi Acacię, q. s.
Ut fiant pilulę ij.

For debilitated Old people.—One or two pills night and morning. (Parag. 161.)

26.

- R. Magnesię Sulphatis \mathfrak{z} j.
Spiritus Ammonię aromatici \mathfrak{z} ss.
Syrupi Rhæados \mathfrak{z} j.
Infusi Sennę compos. \mathfrak{z} vj.

Infusi Gentianæ compos. ʒss.

Misce : fiat haustus.

An Aperient for aged persons.—To be taken in the morning. (Parag. 90, 159.)

27.

R. Tincture Aloes compos. ʒiss.

Liquoris Potassæ m̄ xij.

Potassæ Chloratis gr. viij.

Syrupi Aurantii ʒj.

Infusi Gentianæ compos. ʒix.

Misce : fiat haustus.

To be taken twice a day, an hour or two before food.
(Parag. 113.)

28.

R. Pilulæ Aloes c̄ sapone P. L. gr. x.

In pilulas ij divide.

Or,

R. Pilulæ Aloes compos. P. L. gr. x.

Fiant pilulæ ij.

Aperient in Hysterical and other cases.—The second formula is most suitable when there is great want of tone. (Parag. 90, 107, 138.)

29.

R. Bismuthi Nitratis ʒj.

Pulveris Tragacanthæ compos. ʒij.

Tincturæ Cardamomi compos.

Tincturæ Zingiberis aa ʒss.

Aquæ Anethi ʒvij.

Misce : fiat mistura.

Dyspepsia.—Two tablespoonfuls to be taken twice a day. (Parag. 101.)

30.

- R. Potassæ Acetatis gr. xv.
Potassæ Nitratis gr. viij.
Spiritus Juniperi compos. m̄ xl.
Syrupi Rosæ ʒj.
Aquæ Menthæ sativæ ʒj.
Misce: fiat haustus.

In cases of Plethoric Headaches.—To be taken twice a day. (Parag. 78.)

31.

- R. Tincturæ Ferri Sesquichloridi m̄ x.
Acidi Hydrochlorici m̄ iij.
Tincturæ Cinnamomi compos. ʒj.
Syrupi Rhæados ʒiiss.
Aquæ Cinnamomi ʒvss.
Misce: fiat haustus.

To be taken twice a day, about an hour after food. (Parag. 89, 137, 138.)

32.

- R. Manganisæ Sulphatis ʒj.
Magnesiæ Sulphatis exsiccata ʒj.
Pulveris aromatici gr. v.
Misce: fiat pulvis.

Aperient in Bilious cases.—To be taken in the morning mixed with a little warm tea.

33.

- R. Potassæ Carbonatis ʒj.
Ammonisæ Sesquicarbonati gr. xij.
Tincturæ Serpentariæ ʒj.
Aquæ Camphoræ ʒxj.
Misce: fiat haustus.

A tablespoonful of lemon juice to be added, and to be taken effervescing twice or three times a day.

34.

- R. Bismuthi Nitratis
 Sodæ Carbonatis exsicc. aa gr. vj.
 Pulveris Piperis Capsici gr. j.
 Misce: fiat pulvis.

In Dyspepsia with acidity.—One powder twice a day.
 (Parag. 101.)

35.

- R. Pilulæ Colocynthis compos. ℥iiss.
 Saponis Castillensis gr. ix.
 Olei Anethi m̄ ij.
 Misce: in pilulas xij. divide.

An ordinary Aperient.—Two to be taken at bedtime.
 (Parag. 78, 101.)

36.

- R. Magnesiæ Sulphatis
 Sodæ Sulphatis aa ℥ij.
 Acidi Sulphurici diluti m̄ x.
 Syrupi Rhæados ʒj.
 Tincturæ Cardamomi compos. ʒj.
 Aquæ Anethi ʒx.
 Misce: fiat haustus.

To be taken twice a day. (Parag. 83.)

37.

- R. Ferri Sulphatis gr. ij.
 Magnesæ Sulphatis ℥ij.
 Acidi Sulphurici diluti m̄ viij.
 Tincturæ Cardamomi compos. ʒj.
 Syrupi Rhæados ʒiiss.
 Aquæ Pimentæ ʒix.
 Misce: fiat haustus.

Tonic.—In Congestive Headaches, &c.—To be taken twice a day. (Parag. 89, 141.)

38.

℞. Confectionis aromaticæ gr. x.
Sodæ Carbonatis gr. iv.
Tincturæ Cinnamomi compos.
Syrupi āā ʒj.
Aquæ Menthæ piperitæ ʒx.
Misce: fiat haustus.

*To relieve the pain in Hysterical and Nervous cases,
with much flatulence. (Parag. 131.)*

39.

℞. Extracti Hyoscyami
Pulveris Camphoræ āā gr. iiss.
Misce: fiant pilulæ ij. (Deaurentur.)

*In Nervous Headaches—To be taken when the pain
is very severe. (Parag. 131.)*

40.

℞. Potassæ Carbonatis gr. vj.
Potassæ Chloratis gr. viij
Tincturæ Cinnamomi compos. ʒss.
Infusi Aurantii ʒxss.
Syrupi Aurantii ʒj.
Misce: fiat haustus.

*To be taken twice or three times a day in Rheumatic
Headaches. (Parag. 145.)*

41.

℞. Acidi Phosphorici diluti ʒss.
Tincturæ Rhei compositæ ʒj.
Spiritus Ætheris nitrici m̄ xl.
Infusi Gentianæ compos. ʒix.
Syrupi Aurantii ʒj.
Misce: fiat haustus.

*To be taken twice or thrice a day. (Parag. 137,
161.)*

42.

- ℞. Pilulæ Colocynthis compos. gr. xv.
Extracti Colchici acetici gr. iij.
Olei Carui m̄ j.

Misce: in pilulas iv divide.

Aperient.—*Two to be taken at bedtime, in Rheumatic and Gouty cases, and one on consecutive nights.* (Parag. 142, 145.)

43.

- ℞. Pulveris Tragacanthæ compos. gr. viij.
Olei Limonum m̄ ij.
Aquæ Camphoræ ʒxj.
Tincturæ Cardamomi compos.
Tincturæ Hyoscyami aa ʒss.
Chloroformi m̄ x.

Misce: fiat haustus.

To relieve the pain in Nervous Headaches. (Parag. 131.)

44.

- ℞. Zinci Sulphatis gr. x.
Extracti Anthemidis ʒj.
Olei Lavandulæ m̄ iij.

Misce: fiant pilulæ vj.

Tonic.—*One to be taken twice a day.* (Parag. 138.)

45.

- ℞. Spiritus Juniperi compos. ʒj.
Tincturæ Cinnamomi compos. ʒss.
Syrupi Zingiberis ʒj.
Infusi Cascariellæ ʒvj.
Aquæ Menthæ piperitæ ʒss.

Misce: fiat haustus.

To be taken twice or three times a day. (Parag. 161.)

46.

- R. Acidi Nitrici diluti $\overline{\text{m}}$ x.
 Acidi Hydrochlorici $\overline{\text{m}}$ v.
 Infusi Cascarillæ, ʒvj .
 Syrupi Rhæados ʒj .
 Misce : fiat haustus.

To be taken twice a day. (Parag. 107, 137.)

47.

- R. Tincturæ Sennæ compos.
 Magnesiæ Sulphatis $\overline{\text{aa}}$ ʒij .
 Acidi Sulphurici aromat. $\overline{\text{m}}$ xv.
 Syrupi aurantii ʒj .
 Infusi Rhæi ʒix .
 Misce : fiat haustus.

A morning Aperient in cases of Congestive Headache.
 (Parag. 89, 160.)

48.

- R. Infusi Sennæ compos.
 Infusi Rhei $\overline{\text{aa}}$ ʒv .
 Tincturæ Cardamomi compos. ʒss .
 Syrupi ʒss .
 Misce : fiat haustus.

For Dyspeptic persons of weakly constitutions.—To
taken in the morning. (Parag. 101.)

49.

- R. Quinæ Disulphatis gr. iss.
 Ferri Carbonatis $\overline{\text{c}}$ Saccharo gr. iij.
 Pulveris Cinnamomi compos. gr. viij.
 Misce : fiat pulvis.

To be taken twice or three times a day, commencing
th half a powder. (Parag. 140.)

50.

℞. Sodæ Carbonatis gr. x.
Spiritus Ammoniae aromatici ℥ss.
Tincturæ Aurantii
Syrupi Aurantii āā ℥j.
Infusi Gentianæ compos. ℥x.
Misce : fiat haustus.

To be taken twice a day. (Parag. 101, 107.)

THE END.



